APPENDICES

Appendix 1

Plant Tissue Culture Media Formulation

i) Murashige and Skoog (1962) MS basal nutrients formulation

Components	Concentration in Media (mg/L)	Stock solution concentration
Macronutrients		
$CaCl_2.2H_2O$	440	
KNO_3	1900	10 X
KH_2PO_4	170	
$MgSO_4.7H_20$	370	
NH_4NO_3	1650	
Micronutrients	0.025	
$CoCl_2.6H_2O$	0.025	
$CuSO_4.5H_2O$	6.2	100 X
H_3BO_4	0.83	
KI	22.3	
$MnSO_4.4H_20$	0.25	
$Na_2MoO_4.4H_2O$	8.6	
$ZnSO_4.7H_2O$		
Vitamins		
Glycine	2.0	
Nicotinic acid	0.5	100 X
Pyrodoxine-HCl	0.5	
Thiamine-HCl	0.1	
Myo-inositol	100	1 X
Iron		
$FeSO_4.7H_2O$	27.85	100 X
Na_2EDTA	37.25	

The pH of media was adjusted to 5.8 ± 0.5 (for agar) or 5.8 ± 0.5 (for liquid) prior to autoclaving.

(ii) Sterilization methods

a. Using hot steam

All apparatus includes glassware, equipments and media were sterilized using autoclave machine under 121°C, with pressure 1.2 kgf/ cm^2 condition maintained for 20 minutes.

b. Using filtration

For heat-labile or temperature-sensitive compounds such as plant growth regulators which would be altered by hot steam sterilization, filtration was used as the alternative way of sterilization. In these experiments, all

those compounds were passed through a 0.22 µm nitrocellulose filter (Millex ® - GV, Millipore).

iii) Preparation of plant growth regulators used in plant tissue culture

Plant Growth Regulators	Solubility	Stock Concentration	Method of Sterilization
6 －BAP	NaOH	1 mg / ml	Autoclaving
NAA	NaOH	0.2 mg / ml	Autoclaving

iv) Preparation of Acetosyringone (AS)

100 µM/ L Acetosyringone was prepared using 100 mM/ml AS stock which had been prepared by dissolving 0.4905 g of AS powder into 25 ml of Dimethyl Sulfoxide (DMSO).

Appendix 2

i) Bacteria Culture Media Preparation

Luria Bertani Broth (LB) – 1 Liter

24.0 g of LB Broth powder were dissolved with 1 liter distil water in the Schotte bottle.

Luria Bertani (LB) Agar Plate – 1 Litre

37.0 g of LB Agar powder were dissolved with 1 liter distil water in the Schotte bottle.

The pH of the media was adjusted to 7.5 ± 0.05 prior to autoclaving.

ii) Preparation of antibiotics used in bacterial culture

Bacterial Antibiotics	Solubility	Stock Concentration	Method of Sterilization
Rifampycin	Water	10 mg / ml	Filtration
Streptomycin	Water	100 mg / ml	Filtration

Additional of heat labile antibiotic was done only after media temperature cooled down to ≈ 50°C.

Appendix 3

Plasmid Extraction Chemical Solution

Label	Description	Contents
Resuspension Buffer[1]	Cell resuspensionbuffer	70 mL
Lysis Buffer[2]	Cell lysis buffer	70 mL
Neutralization Buffer		100 mL
Washing buffer A[3]	Washing buffer A for *end*A+ stains	140 mL
Washing buffer B(concentrate)[4]	Washing buffer B	50 mL X 2ea
Elution Buffer	Elution buffer	20 mL
DNA-spin™ column (Clear tube with cap & yellow O-ring	Nucleic acid binding column	250 col.
Collection tube	2 mL polypropylene tube	250 tubes
RNaseA Solution	10 μg/mL	3.8 mL

1)Resuspension Buffer :

3.5 mL (250columns) of RNase A Solution was added into Resuspension Buffer before use. Then, stored at 4℃.

2)Lysis Buffer :

Lysis Buffer need to be checked for SDS precipitation due to low storage temperature, in some case it is necessary to dissolve the SDS by warming to 4℃.

3)Washing Buffer A :

Washing Buffer A of DNA-spin^{TM}Kit are essentially used to remove *end*A^{+}strains such as HB101, the JM strains, NM series strains, PR series strains and some other wide-type strains which have high endonucleases activity: endonucleases, that can degrade plasmid DNA.

4)Washing Buffer B was supplied as concentrate. Depend on the bottle label, 200 mL (250columns) per each bottles of ethanol (96~100%) was added before use.

Appendix 4

Homogenization buffer – 1 Liter

100 mM Tris-HCl	– 15.76 g
20 mM EDTA	– 40 ml of 0.5 M, pH 8.0 EDTA
2 % w/v CTAB	– 20.0 g
1.42 M NaCl	– 81.8 g
2 % w/v PVP-40	– 20.0 g
5 mM ascorbic acid	– 0.88 g
4.0 mM DIECA	– 0.96 g

Volume was top up to 1000 ml, autoclaved prior to use and kept at room temperature.

TE Buffer

pH 8.0	10 mM Tris-Cl (pH 7.8) 1 mM EDTA (pH 8.0)

50 X TAE buffer (1000 ml) stock

Tris base – 121 g
Glacial acetic acid – 28.55 ml
0.5 M, pH 8.0 EDTA – 50 ml
} Bring the volume to 500 ml with dH_2O

Stock was diluted to 0.5 X TAE buffer prior to electrophoresis by additional 10 ml of stock into 990 ml dH_2O.

6 X Loading Dye

10 mM Tris-HCl (pH 7.6)
0.03% Bromophenol blue
0.03% Xylene cyanol FF
60% Glycerol
60 mM EDTA

Appendix 5

Components prepared in the PCR reaction mixture for *rol C* gene amplification.

No	Particulars	Volume
1	10 X Reaction Buffer	2.0 µL
2	10 mM dNTP mix	2.0 µL
3	*rolC* forward primer 10 pmoles	0.5 µL
4	*rolC* reverse primer 10 pmoles	0.5 µL
5	*virD1* forward primer 10 pmoles	0.5 µL
6	*virD1* reverse primer 10 pmoles	0.5 µL
7	Taq Polymerase (5 U/ µL)	0.5 µL
8	Templete DNA (100 ng/µL)	1.0 µL
9	sdH_2O	13.5 µL
Total volume per Reaction		**20.0 µL**

Appendix 6

Effect of combination of NAA and BAP on roots induction results.

Media 0.5N	Total roots no.	Big roots	Small roots
1	16	0	16
2	12	0	12
3	18	0	18
4	20	0	20
number	4	4	4
mean	16.5	0	16.5
stddev	3.416	0.000	3.416
std err	1.708	0.000	1.708

Media 1B0.5N	Total roots no.	Big roots	Small roots
1	1	1	0
2	1	1	0
3	4	1	3
4	5	4	0
number	4	4	4
mean	2.75	1.75	0.75
stddev	2.062	1.500	1.500
std err	1.031	0.750	0.750

Media 0.5B0.5N	Total roots no.	Big roots	Small roots
1	4	3	1
2	3	3	0
3	6	2	4
4	9	6	3
number	4	4	4
mean	5.5	3.5	2
stddev	2.646	1.732	1.826
std err	1.323	0.866	0.913

Media 1.5B0.5N	Total roots no.	Big roots	Small roots
1	3	2	1
2	5	3	2
3	5	2	3
4	4	2	2
number	4	4	4
mean	4.25	2.25	2
stddev	0.957	0.500	0.816
std err	0.479	0.250	0.408

Media 0.5B1.0N	Total roots no.	Big roots	Small roots
1	2	1	1
2	2	1	1
3	4	2	2
4	3	2	1
number	4	4	4
mean	2.75	1.5	1.25
stddev	0.957	0.577	0.500
std err	0.479	0.289	0.250

Media 1.0B1.0N	Total roots no.	Big roots	Small roots
1	9	5	4
2	2	1	1
3	6	3	3
4	2	1	1
number	4	4	4
mean	4.75	2.5	2.25
stddev	3.403	1.915	1.500
std err	1.702	0.957	0.750

Media 1.5B1.0N	Total roots no.	Big roots	Small roots
1	5	2	3
2	1	0	1
3	3	1	2
4	3	2	1
number	4	4	4
mean	3	1.25	1.75
stddev	1.633	0.957	0.957
std err	0.816	0.479	0.479

Media 0.5B2.0N	Total roots no.	Big roots	Small roots
1	1	0	1
2	5	3	2
3	9	7	2
4	1	0	1
number	4	4	4
mean	4	2.5	1.5
stddev	3.830	3.317	0.577
std err	1.915	1.658	0.289

Media 2.0B1.0N	Total roots no.	Big roots	Small roots
1	0	0	0
2	4	2	2
3	1	2	0
4	4	3	1
number	4	4	4
mean	2.25	1.75	0.75
stddev	2.062	1.258	0.957
std err	1.031	0.629	0.479

Media 1.0B2.0N	Total roots no.	Big roots	Small roots
1	0	0	0
2	8	6	2
3	4	2	2
4	4	3	1
number	4	4	4
mean	4	2.75	1.25
stddev	3.266	2.500	0.957
std err	1.633	1.250	0.479

Media 1.5B2.0N	Total roots no.	Big roots	Small roots
1	6	2	4
2	2	2	0
3	0	0	0
4	3	3	0
number	4	4	4
mean	2.75	1.75	1
stddev	2.500	1.258	2.000
std err	1.250	0.629	1.000

Media 2.0B2.0N	Total roots no.	Big roots	Small roots
1	4	4	0
2	2	1	1
3	5	3	2
4	7	5	2
number	4	4	4
mean	4.5	3.25	1.25
stddev	2.082	1.708	0.957
std err	1.041	0.854	0.479

Media control	Total roots no.	Big roots	Small roots
1	2	0	2
2	6	0	6
3	7	0	7
number	3	3	3
mean	5	0	5
stddev	2.646	0.000	2.646
std err	1.528	0.000	1.528

Media 2.0B0.5N	Total roots no.	Thick roots	Thin roots
1	1	1	0
2	2	2	0
3	1	1	0
4	3	3	0
number	4	4	4
mean	1.75	1.75	0
stddev	0.957	0.957	0.000
std err	0.479	0.479	0.000

Appendix 7
Statistical analysis of exogenous PGRs effect on roots induction of *B. rotunda.*

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	Between-Component Variance
						Lower Bound	Upper Bound			
0.5N		4	16.50	3.416	1.708	11.06	21.94	12	20	
0.5B0.5N		4	5.50	2.646	1.323	1.29	9.71	3	9	
1.0B0.5N		4	2.75	2.062	1.031	-.53	6.03	1	5	
1.5B0.5N		4	4.25	.957	.479	2.73	5.77	3	5	
2.0B0.5N		4	1.75	.957	.479	.23	3.27	1	3	
0.5B1.0N		4	2.75	.957	.479	1.23	4.27	2	4	
1.0B1.0N		4	4.75	3.403	1.702	-.67	10.17	2	9	
1.5B1.0N		4	3.00	1.633	.816	.40	5.60	1	5	
2.0B1.0N		4	2.25	2.062	1.031	-1.03	5.53	0	4	
0.5B2.0N		4	4.00	3.830	1.915	-2.09	10.09	1	9	
1.0B2.0N		4	4.00	3.266	1.633	-1.20	9.20	0	8	
1.5B2.0N		4	2.75	2.500	1.250	-1.23	6.73	0	6	
2.0B2.0N		4	4.50	2.082	1.041	1.19	7.81	2	7	
Total		52	4.52	4.245	.589	3.34	5.70	0	20	
Model	Fixed Effects			2.482	.344	3.82	5.22			
	Random Effects				1.043	2.25	6.79			12.600

Test of Homogeneity of Variances.

Levene Statistic	df1	df2	Sig.
1.473	12	39	.176

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	678.731	12	56.561	9.182	.000
Within Groups	240.250	39	6.160		
Total	918.981	51			

Post Hoc Tests

Homogeneous Subsets

Duncan

		Subset for alpha = 0.05	
VAR00001	N	1	2
2.0B0.5N	4	1.75	
2.0B1.0N	4	2.25	
1.0B0.5N	4	2.75	
0.5B1.0N	4	2.75	
1.5B2.0N	4	2.75	
1.5B1.0N	4	3.00	
0.5B2.0N	4	4.00	
1.0B2.0N	4	4.00	
1.5B0.5N	4	4.25	
2.0B2.0N	4	4.50	
1.0B1.0N	4	4.75	
0.5B0.5N	4	5.50	
0.5N	4		16.50
Sig.		.080	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 4.000.

Appendix 8
Statistical analysis of exogenous PGRs effect on thick roots induction of *B. rotunda.*

Descriptives

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	Between- Component Variance
					Lower Bound	Upper Bound			
0.5N	4	.00	.000	.000	.00	.00	0	0	
0.5B0.5N	4	3.50	1.732	.866	.74	6.26	2	6	
1.0B0.5N	4	1.75	1.500	.750	-.64	4.14	1	4	
1.5B0.5N	4	2.25	.500	.250	1.45	3.05	2	3	
2.0B0.5N	4	1.75	.957	.479	.23	3.27	1	3	
0.5B1.0N	4	1.50	.577	.289	.58	2.42	1	2	
1.0B1.0N	4	2.50	1.915	.957	-.55	5.55	1	5	
1.5B1.0N	4	1.25	.957	.479	-.27	2.77	0	2	
2.0B1.0N	4	1.75	1.258	.629	-.25	3.75	0	3	
0.5B2.0N	4	2.50	3.317	1.658	-2.78	7.78	0	7	
1.0B2.0N	4	2.75	2.500	1.250	-1.23	6.73	0	6	
1.5B2.0N	4	1.75	1.258	.629	-.25	3.75	0	3	
2.0B2.0N	4	3.25	1.708	.854	.53	5.97	1	5	
Total	52	2.04	1.680	.233	1.57	2.51	0	7	
Model Fixed Effects			1.633	.226	1.58	2.50			
Random Effects				.253	1.49	2.59			.165

Test of Homogeneity of Variances

VAR00002

Levene Statistic	df1	df2	Sig.
2.313	12	39	.024

ANOVA

VAR00002

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	39.923	12	3.327	1.248	.288
Within Groups	104.000	39	2.667		
Total	143.923	51			

Post Hoc Tests
Homogeneous Subsets

VAR00002

Duncan[a]

VAR00001	N	Subset for alpha = 0.05	
		1	2
0.5N	4	.00	
1.5B1.0N	4	1.25	1.25
0.5B1.0N	4	1.50	1.50
1.0B0.5N	4	1.75	1.75
2.0B0.5N	4	1.75	1.75
2.0B1.0N	4	1.75	1.75
1.5B2.0N	4	1.75	1.75
1.5B0.5N	4	2.25	2.25
1.0B1.0N	4	2.50	2.50
0.5B2.0N	4	2.50	2.50
1.0B2.0N	4	2.75	2.75
2.0B2.0N	4		3.25
0.5B0.5N	4		3.50
Sig.		.050	.110

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 4.000.

Appendix 9

Statistical analysis of exogenous PGRs effect on thin roots induction of *B. rotunda.*

Descriptives

VAR00002

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	Between-Component Variance
						Lower Bound	Upper Bound			
0.5N		4	16.50	3.416	1.708	11.06	21.94	12	20	
0.5B0.5N		4	2.00	1.826	.913	-.91	4.91	0	4	
1.0B0.5N		4	.75	1.500	.750	-1.64	3.14	0	3	
1.5B0.5N		4	2.00	.816	.408	.70	3.30	1	3	
2.0B0.5N		4	.00	.000	.000	.00	.00	0	0	
0.5B1.0N		4	1.25	.500	.250	.45	2.05	1	2	
1.0B1.0N		4	2.25	1.500	.750	-.14	4.64	1	4	
1.5B1.0N		4	1.75	.957	.479	.23	3.27	1	3	
2.0B1.0N		4	.75	.957	.479	-.77	2.27	0	2	
0.5B2.0N		4	1.50	.577	.289	.58	2.42	1	2	
1.0B2.0N		4	1.25	.957	.479	-.27	2.77	0	2	
1.5B2.0N		4	1.00	2.000	1.000	-2.18	4.18	0	4	
2.0B2.0N		4	1.25	.957	.479	-.27	2.77	0	2	
Total		52	2.48	4.327	.600	1.28	3.69	0	20	
Model	Fixed Effects			1.478	.205	2.07	2.90			
	Random Effects				1.181	-.09	5.05			17.573

Test of Homogeneity of Variances

VAR00002

Levene Statistic	df1	df2	Sig.
3.305	12	39	.002

ANOVA

VAR00002

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	869.731	12	72.478	33.157	.000
Within Groups	85.250	39	2.186		
Total	954.981	51			

Post Hoc Tests
Homogeneous Subsets

VAR00002

Duncan[a]

VAR00001	N	Subset for alpha = 0.05	
		1	2
2.0B0.5N	4	.00	
1.0B0.5N	4	.75	
2.0B1.0N	4	.75	
1.5B2.0N	4	1.00	
0.5B1.0N	4	1.25	
1.0B2.0N	4	1.25	
2.0B2.0N	4	1.25	
0.5B2.0N	4	1.50	
1.5B1.0N	4	1.75	
0.5B0.5N	4	2.00	
1.5B0.5N	4	2.00	
1.0B1.0N	4	2.25	
0.5N	4		16.50
Sig.		.078	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 4.000.

Appendix 10

Absorbance Value recorded from *Agrobacterium rhizogenes* strain A4 growth system

at 600 nm

Hours	Absorbance 1	Absorbance 2	Average Absorbance
0	-0.033	-0.033	-0.033
1	-0.029	-0.037	-0.033
2	-0.087	-0.090	-0.089
3	-0.109	-0.125	-0.117
4	-0.136	-0.136	-0.136
5	-0.143	-0.140	-0.142
6	0.007	0.009	0.008
7	0.026	0.033	0.030
8	0.035	0.036	0.036
9	0.074	0.071	0.073
10	0.126	0.126	0.126
11	0.197	0.195	0.196
12	0.313	0.311	0.312
13	0.711	0.478	0.595
14	0.699	0.704	0.702
15	1.037	1.01	1.024
16	1.355	1.386	1.371
17	1.859	1.826	1.843
18	2.08	2.064	2.072
19	2.306	2.282	2.294
20	2.474	2.464	2.469
21	2.589	2.526	2.558
22	2.608	2.552	2.580
23	2.578	2.614	2.596
24	2.597	2.67	2.634
25	2.642	2.679	2.661
26	2.668	2.63	2.649
27	2.688	2.632	2.660
28	2.648	2.532	2.590
29	2.587	2.621	2.604
30	2.59	2.632	2.611

Appendix 11 The numbers of roots grown taken for 8 weeks period of culture based on visual observation.

20 min infection time	No. of Replicate	No.Root week 1					No.Root week 4					No.Root week 8				
		1	2	3	Mean W1	SD W1	1	2	3	Mean 4W	SD 4W	1	2	3	Mean 8W	SD 8W
control	3	1	0	0	0.3333	0.5774	1	1	0	0.6667	0.5774	2	2	1	1.6667	0.5774
Co1	3	0	0	0	0.0000	0.0000	1	0	1	0.6667	0.5774	1	1	1	1.0000	0.0000
Co2	3	0	0	0	0.0000	0.0000	0	1	0	0.3333	0.5774	1	1	1	1.0000	0.0000
Co3	3	0	0	0	0.0000	0.0000	1	2	0	1.0000	1.0000	1	2	1	1.3333	0.5774
Co1AS	3	0	0	0	0.0000	0.0000	1	1	1	1.0000	0.0000	2	3	1	2.0000	1.0000
Co2AS	3	0	1	0	0.3333	0.5774	2	4	1	2.3333	1.5275	4	5	1	3.3333	2.0817
Co3AS	3	0	0	0	0.0000	0.0000	1	1	1	1.0000	0.0000	1	1	2	1.3333	0.5774
1hr infection time	No. of Replicate	No.Root week 1					No.Root week 4					No.Root week 8				
		1	2	3	Mean W1	SD W1	1	2	3	Mean 4W	SD 4W	1	2	3	Mean 8W	SD 8W
Co1	3	0	0	0	0.0000	0.0000	1	1	0	0.6667	0.5774	2	4	1	2.3333	1.528
Co2	3	0	0	0	0.0000	0.0000	0	1	1	0.6667	0.5774	2	2	2	2.0000	0.000
Co3	3	0	0	0	0.0000	0.0000	1	1	2	1.3333	0.5774	1	2	3	2.0000	1.000
Co1AS	3	0	0	0	0.0000	0.0000	1	1	1	1.0000	0.0000	1	2	2	1.6667	0.577
Co2AS	3	1	0	0	0.3333	0.5774	3	2	1	2.0000	1.0000	4	4	3	3.6667	0.577
Co3AS	3	0	0	1	0.3333	0.5774	1	1	1	1.0000	0.0000	1	1	2	1.3333	0.577

Appendix 12

Statistical analysis on numbers of roots grown for 20 min infection.

Descriptives

VAR00002

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	Between-Component Variance
						Lower Bound	Upper Bound			
Co1		3	1.00	.000	.000	1.00	1.00	1	1	
Co2		3	1.00	.000	.000	1.00	1.00	1	1	
Co3		3	1.33	.577	.333	-.10	2.77	1	2	
Co1AS		3	2.00	1.000	.577	-.48	4.48	1	3	
Co2AS		3	3.33	2.082	1.202	-1.84	8.50	1	5	
Co3AS		3	1.33	.577	.333	-.10	2.77	1	2	
Total		18	1.67	1.188	.280	1.08	2.26	1	5	
Model	Fixed Effects			1.000	.236	1.15	2.18			
	Random Effects				.365	.73	2.61			.467

Test of Homogeneity of Variances

VAR00002

Levene Statistic	df1	df2	Sig.
5.333	5	12	.008

ANOVA

VAR00002

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	12.000	5	2.400	2.400	.099
Within Groups	12.000	12	1.000		
Total	24.000	17			

Post Hoc Tests

Homogeneous Subsets

VAR00002

Duncan[a]

VAR00001	N	Subset for alpha = 0.05	
		1	2
Co1	3	1.00	
Co2	3	1.00	
Co3	3	1.33	
Co3AS	3	1.33	
Co1AS	3	2.00	2.00
Co2AS	3		3.33
Sig.		.285	.128

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Appendix 13
Statistical analysis on numbers of roots grown for 1 hr infection.

Descriptives

VAR00002

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	Between-Component Variance
						Lower Bound	Upper Bound			
Co1		3	2.33	1.528	.882	-1.46	6.13	1	4	
Co2		3	2.00	.000	.000	2.00	2.00	2	2	
Co3		3	2.00	1.000	.577	-.48	4.48	1	3	
Co1AS		3	1.67	.577	.333	.23	3.10	1	2	
Co2AS		3	3.67	.577	.333	2.23	5.10	3	4	
Co3AS		3	1.33	.577	.333	-.10	2.77	1	2	
Total		18	2.17	1.043	.246	1.65	2.69	1	4	
Model	Fixed Effects			.850	.200	1.73	2.60			
	Random Effects				.331	1.32	3.02			.415

Test of Homogeneity of Variances

VAR00002

Levene Statistic	df1	df2	Sig.
2.560	5	12	.085

ANOVA

VAR00002

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	9.833	5	1.967	2.723	.072
Within Groups	8.667	12	.722		
Total	18.500	17			

Post Hoc Tests

Homogeneous Subsets

VAR00002

Duncan[a]

VAR00001	N	Subset for alpha = 0.05	
		1	2
Co3AS	3	1.33	
Co1AS	3	1.67	
Co2	3	2.00	
Co3	3	2.00	
Co1	3	2.33	2.33
Co2AS	3		3.67
Sig.		.212	.079

Means for groups in homogeneous subsets are displayed.

VAR00002

Duncan[a]

VAR00001	N	Subset for alpha = 0.05	
		1	2
Co3AS	3	1.33	
Co1AS	3	1.67	
Co2	3	2.00	
Co3	3	2.00	
Co1	3	2.33	2.33
Co2AS	3		3.67
Sig.		.212	.079

Means for groups in homogeneous subsets are displayed.

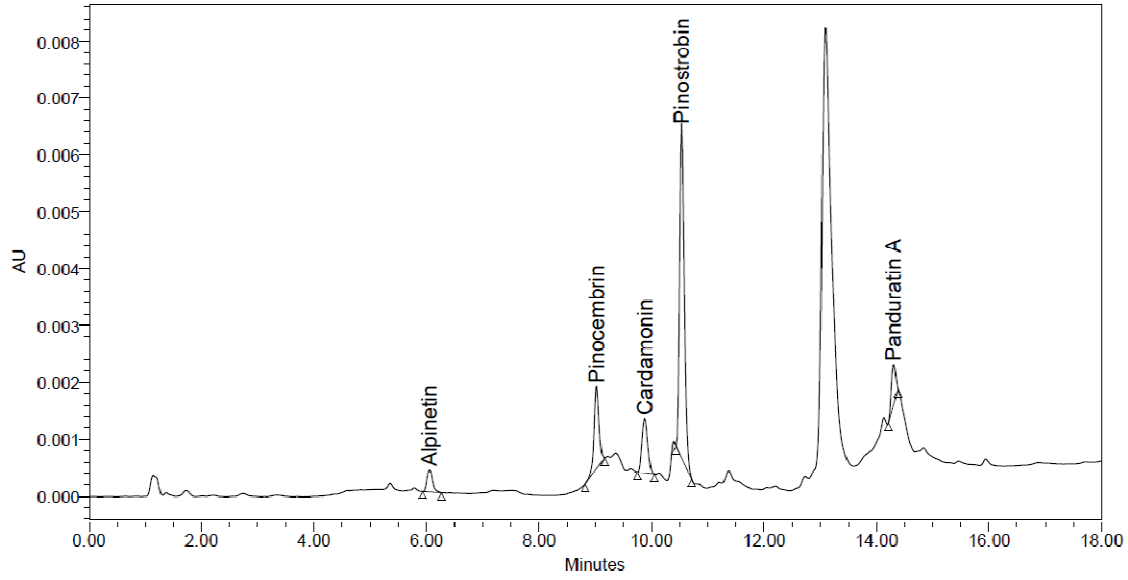
a. Uses Harmonic Mean Sample Size = 3.000.

Appendix 14

PGR0.5B0.5N-1

SAMPLE INFORMATION

Sample Name:	Suzi05B05N200X-1	Acquired By:	System
Sample Type:	Unknown	Sample Set Name:	Suzi05B05N200X1
Vial:	1:B,5	Acq. Method Set:	BR azma
Injection #:	1	Processing Method:	Standard 1
Injection Volume:	20.00 ul	Channel Name:	W2489 ChA
Run Time:	18.0 Minutes	Proc. Chnl. Descr.:	W2489 ChA 285nm
Date Acquired:	5/2/2011 11:31:49 AM MYT		
Date Processed:	5/4/2011 11:40:39 AM MYT		

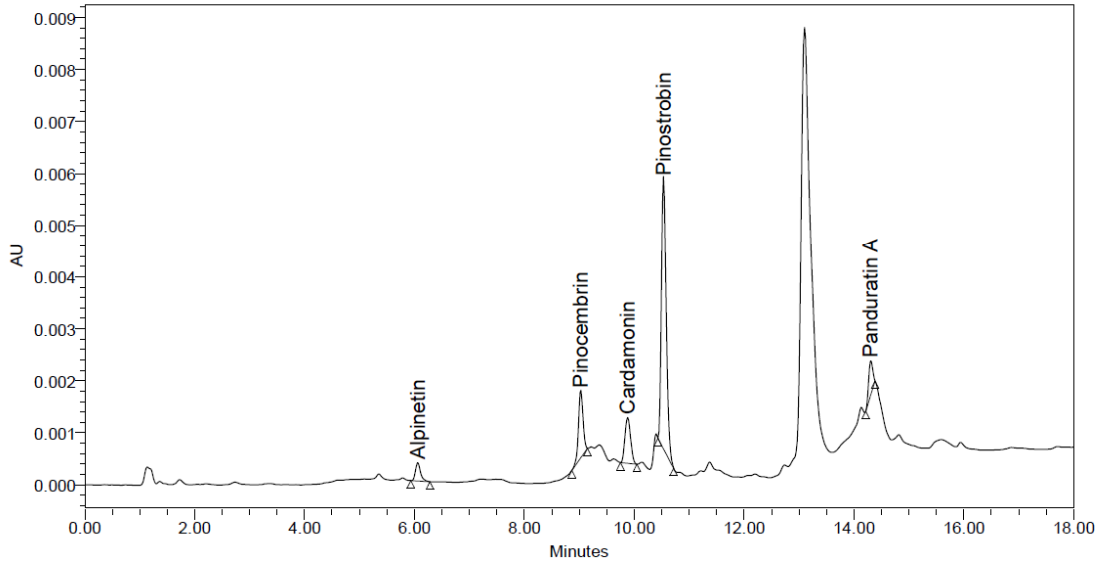


	Peak Name	RT	Area	% Area	Height	Amount	Units	Amount_ug	Concentration	Units	Peak Codes
1	Alpinetin	6.055	2403	4.24	384	0.680	ug/mL	0.000680	0.034023	ug/mL	
2	Pinocembrin	9.026	8644	15.24	1441	2.678	ug/mL	0.002678	0.133917	ug/mL	
3	Cardamonin	9.884	6890	12.15	959	2.812	ug/mL	0.002812	0.140591	ug/mL	
4	Pinostrobin	10.535	35129	61.95	5825	11.737	ug/mL	0.011737	0.586861	ug/mL	Q09
5	Panduratin A	14.303	3642	6.42	722	1.466	ug/ml	0.001466	0.073308	ug/ml	

PGR0.5B0.5N- 2

SAMPLE INFORMATION

Sample Name:	Suzi95B05N200X-3	Acquired By:	System
Sample Type:	Unknown	Sample Set Name:	suzi05B05N200X3
Vial:	1:B,5	Acq. Method Set:	BR azma
Injection #:	1	Processing Method:	Standard 1
Injection Volume:	20.00 ul	Channel Name:	W2489 ChA
Run Time:	18.0 Minutes	Proc. Chnl. Descr.:	W2489 ChA 285nm
Date Acquired:	5/4/2011 12:25:19 PM MYT		
Date Processed:	5/4/2011 1:18:34 PM MYT		

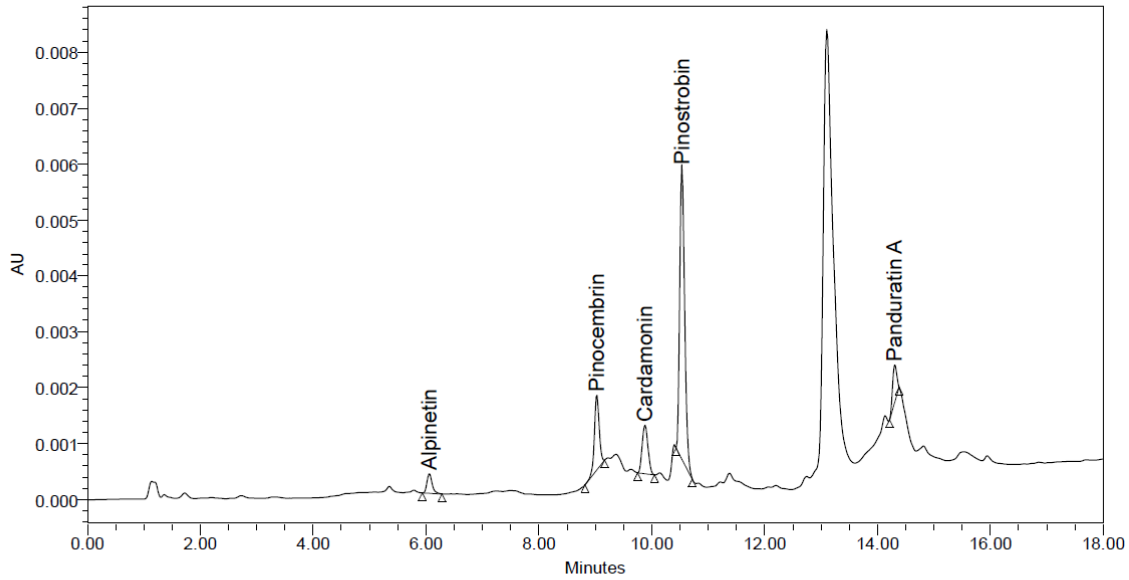


	Peak Name	RT	Area	% Area	Height	Amount	Units	Amount_ug	Concentration	Units	Peak Codes
1	Alpinetin	6.062	2240	4.41	348	0.628	ug/mL	0.000628	0.031423	ug/mL	
2	Pinocembrin	9.028	7400	14.56	1290	2.296	ug/mL	0.002296	0.114793	ug/mL	
3	Cardamonin	9.882	6284	12.36	877	2.549	ug/mL	0.002549	0.127425	ug/mL	
4	Pinostrobin	10.536	31570	62.10	5223	10.559	ug/mL	0.010559	0.527943	ug/mL	Q09
5	Panduratin A	14.302	3346	6.58	663	1.305	ug/ml	0.001305	0.065274	ug/ml	

PGR0.5B0.5N-3

SAMPLE INFORMATION

Sample Name:	Suzi95B05N200X-4	Acquired By:	System
Sample Type:	Unknown	Sample Set Name:	Suzi05B05N200X4
Vial:	1:B,5	Acq. Method Set:	BR azma
Injection #:	1	Processing Method:	Standard 1
Injection Volume:	20.00 ul	Channel Name:	W2489 ChA
Run Time:	18.0 Minutes	Proc. Chnl. Descr.:	W2489 ChA 285nm
Date Acquired:	5/4/2011 12:49:15 PM MYT		
Date Processed:	5/4/2011 1:22:17 PM MYT		

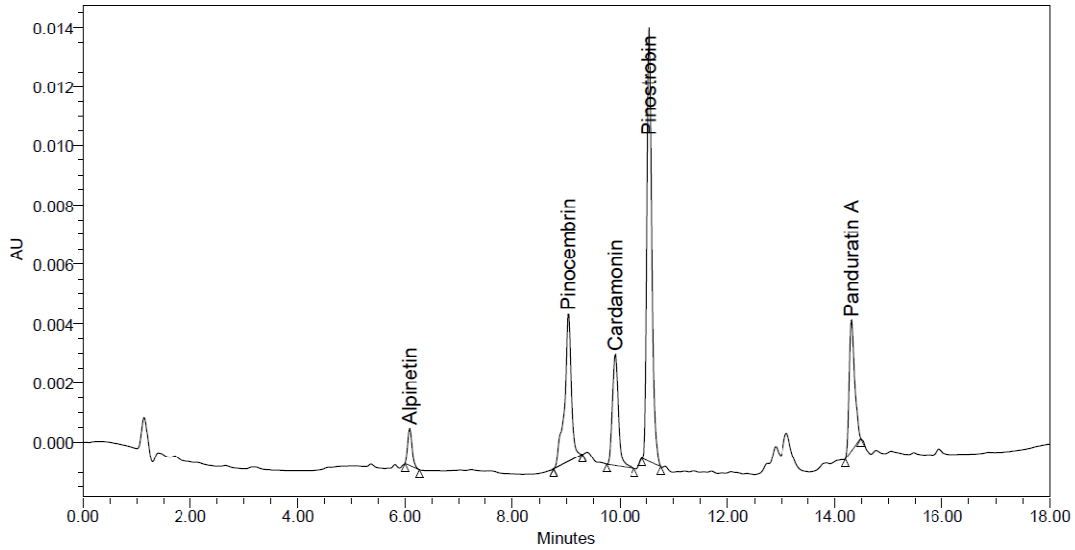


	Peak Name	RT	Area	% Area	Height	Amount	Units	Amount_ug	Concentration	Units	Peak Codes
1	Alpinetin	6.058	2225	4.32	349	0.624	ug/mL	0.000624	0.031183	ug/mL	
2	Pinocembrin	9.027	7821	15.19	1329	2.425	ug/mL	0.002425	0.121268	ug/mL	
3	Cardamonin	9.881	6238	12.11	866	2.528	ug/mL	0.002528	0.126425	ug/mL	
4	Pinostrobin	10.536	31811	61.77	5239	10.639	ug/mL	0.010639	0.531942	ug/mL	Q09
5	Panduratin A	14.302	3403	6.61	673	1.336	ug/ml	0.001336	0.066818	ug/ml	

PGR0.5N-1

SAMPLE INFORMATION

Sample Name:	Suzi05N100X	Acquired By:	System
Sample Type:	Unknown	Sample Set Name:	Suzi05N100X
Vial:	1:B,4	Acq. Method Set:	BR azma
Injection #:	1	Processing Method:	Standard 1
Injection Volume:	20.00 ul	Channel Name:	W2489 ChA
Run Time:	18.0 Minutes	Proc. Chnl. Descr.:	W2489 ChA 285nm
Date Acquired:	4/28/2011 10:38:20 AM MYT		
Date Processed:	5/4/2011 10:58:18 AM MYT		

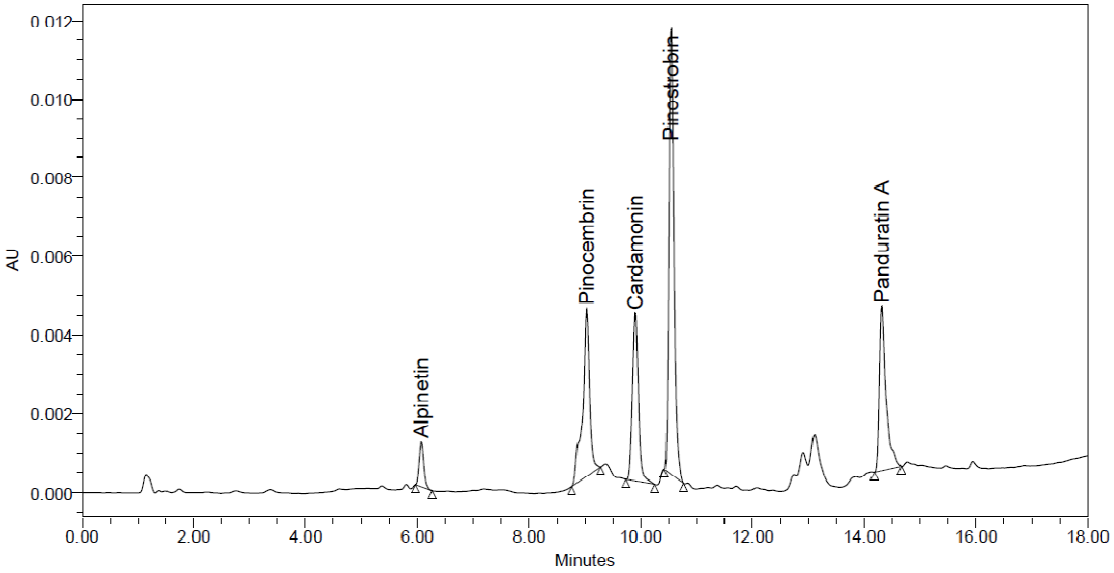


	Peak Name	RT	Area	% Area	Height	Amount	Units	Amount_ug	Concentration	Units	Peak Codes
1	Alpinetin	6.086	7041	3.49	1248	2.162	ug/mL	0.002162	0.108078	ug/mL	
2	Pinocembrin	9.041	42747	21.19	4980	13.161	ug/mL	0.013161	0.658045	ug/mL	I37
3		9.300	0	0.00	0						I37 I06 I21 I22 I23 C02
4	Cardamonin	9.910	28841	14.29	3789	12.358	ug/mL	0.012358	0.617918	ug/mL	
5	Pinostrobin	10.551	92191	45.69	14542	30.631	ug/mL	0.030631	1.531538	ug/mL	Q09
6	Panduratin A	14.314	30951	15.34	4400	16.266	ug/ml	0.016266	0.813285	ug/ml	

PGR0.5N-2

SAMPLE INFORMATION

Sample Name:	Suzi05N100X-2	Acquired By:	System
Sample Type:	Unknown	Sample Set Name:	Suzi05N100X2
Vial:	1:B,5	Acq. Method Set:	BR azma
Injection #:	1	Processing Method:	Standard 1
Injection Volume:	20.00 ul	Channel Name:	W2489 ChA
Run Time:	18.0 Minutes	Proc. Chnl. Descr.:	W2489 ChA 285nm
Date Acquired:	4/28/2011 11:14:31 AM MYT		
Date Processed:	5/4/2011 10:51:29 AM MYT		

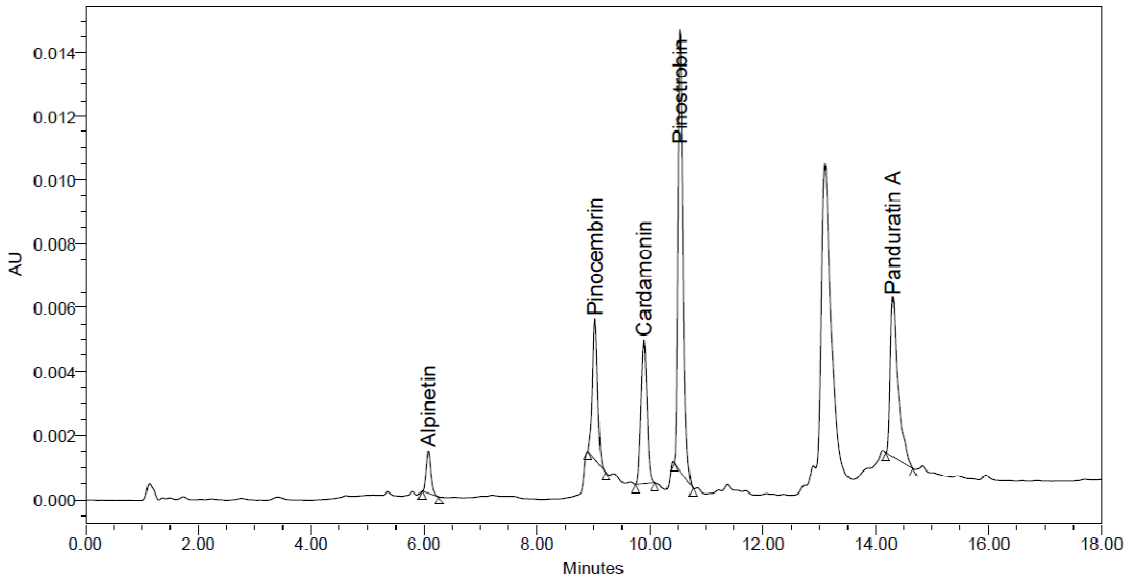


	Peak Name	RT	Area	% Area	Height	Amount	Units	Amount_ug	Concentration	Units	Peak Codes
1	Alpinetin	6.074	6648	3.64	1150	2.036	ug/mL	0.002036	0.101801	ug/mL	
2	Pinocembrin	9.032	36967	20.25	4245	11.384	ug/mL	0.011384	0.569214	ug/mL	
3	Cardamonin	9.905	31246	17.12	4285	13.404	ug/mL	0.013404	0.670214	ug/mL	Q09
4	Pinostrobin	10.545	72470	39.70	11383	24.101	ug/mL	0.024101	1.205064	ug/mL	Q09
5	Panduratin A	14.314	35200	19.28	4187	18.569	ug/ml	0.018569	0.928428	ug/ml	Q09

PGR0.5N-3

SAMPLE INFORMATION

Sample Name:	Suzi05N100X-4	Acquired By:	System
Sample Type:	Unknown	Sample Set Name:	Suzi05N100X4
Vial:	1:B,3	Acq. Method Set:	BR azma
Injection #:	1	Processing Method:	Standard 1
Injection Volume:	20.00 ul	Channel Name:	W2489 ChA
Run Time:	18.0 Minutes	Proc. Chnl. Descr.:	W2489 ChA 285nm
Date Acquired:	5/4/2011 2:29:01 PM MYT		
Date Processed:	5/4/2011 2:48:58 PM MYT		

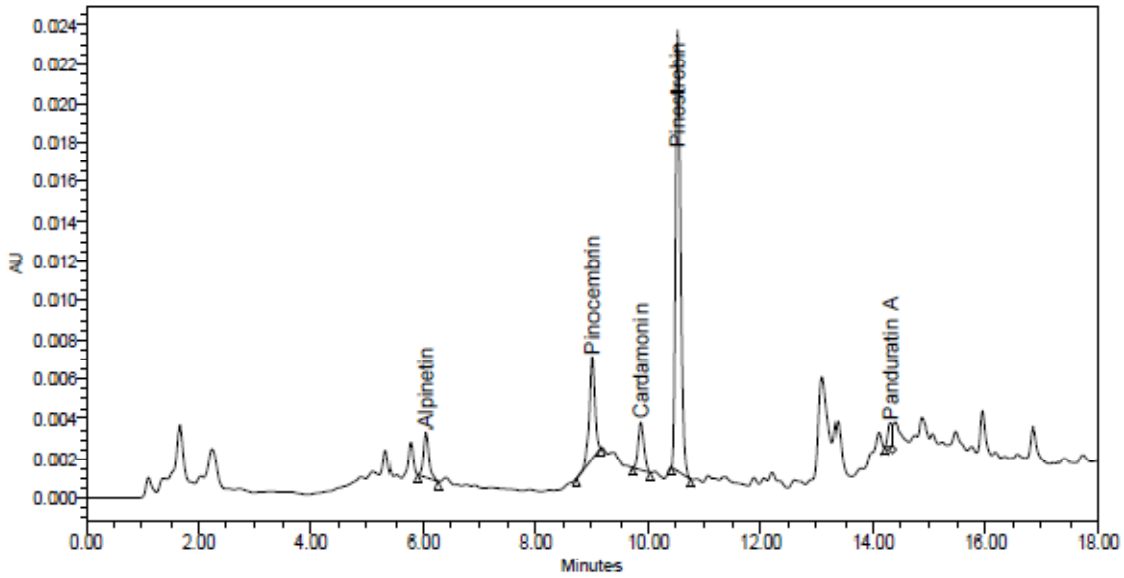


	Peak Name	RT	Area	% Area	Height	Amount	Units	Amount_ug	Concentration	Units	Peak Codes
1	Alpinetin	6.074	7804	3.90	1335	2.405	ug/mL	0.002405	0.120257	ug/mL	
2	Pinocembrin	9.031	27417	13.70	4405	8.449	ug/mL	0.008449	0.422436	ug/mL	
3	Cardamonin	9.899	31615	15.80	4481	13.565	ug/mL	0.013565	0.678242	ug/mL	Q09
4	Pinostrobin	10.541	87246	43.59	13927	28.994	ug/mL	0.028994	1.449676	ug/mL	Q09
5	Panduratin A	14.307	46054	23.01	5052	24.450	ug/ml	0.024450	1.222516	ug/ml	Q09

Control -1

SAMPLE INFORMATION

Sample Name:	SuziControl4X-1	Acquired By:	System
Sample Type:	Unknown	Sample Set Name:	SuziControl4X1
Vial:	1:D,3	Acq. Method Set:	BR azma
Injection #:	1	Processing Method:	Standard 1
Injection Volume:	20.00 ul	Channel Name:	W2489 ChA
Run Time:	18.0 Minutes	Proc. Chnl. Descr.:	W2489 ChA 285nm
Date Acquired:	4/28/2011 2:29:11 PM MYT		
Date Processed:	5/4/2011 11:20:14 AM MYT		

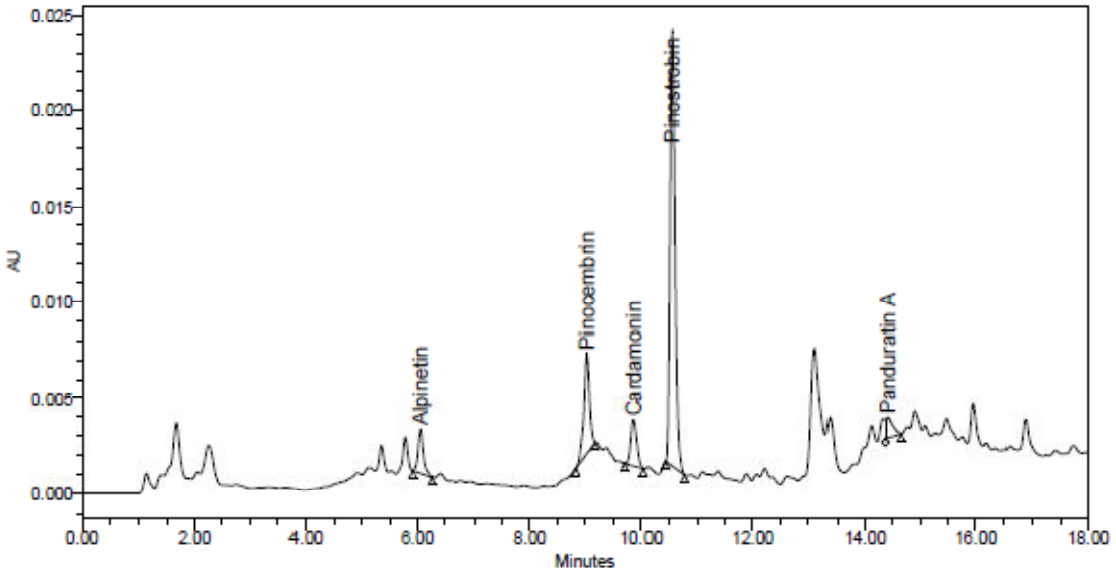


	Peak Name	RT	Area	% Area	Height	Amount	Units	Amount_ug	Concentration	Units	Peak Codes
1	Alpinetin	6.049	15676	7.27	2292	4.919	ug/mL	0.004919	0.245948	ug/mL	
2	Pinocembrin	9.021	36065	16.72	5134	11.107	ug/mL	0.011107	0.555345	ug/mL	
3	Cardamonin	9.868	17672	8.19	2373	7.501	ug/mL	0.007501	0.375057	ug/mL	
4	Pinostrobin	10.537	140517	65.16	22266	46.632	ug/mL	0.046632	2.331590	ug/mL	Q09
5	Panduratin A	14.319	5720	2.65	1089	2.592	ug/ml	0.002592	0.129621	ug/ml	

Control -2

SAMPLE INFORMATION

Sample Name:	SuziControl4X-2	Acquired By:	System
Sample Type:	Unknown	Sample Set Name:	SuziControl4X2
Vial:	1:D,4	Acq. Method Set:	BRazma
Injection #:	1	Processing Method:	Standard 1
Injection Volume:	20.00 ul	Channel Name:	W2489 ChA
Run Time:	18.0 Minutes	Proc. Chnl. Descr.:	W2489 ChA 285nm
Date Acquired:	4/28/2011 2:53:34 PM MYT		
Date Processed:	5/4/2011 11:09:25 AM MYT		

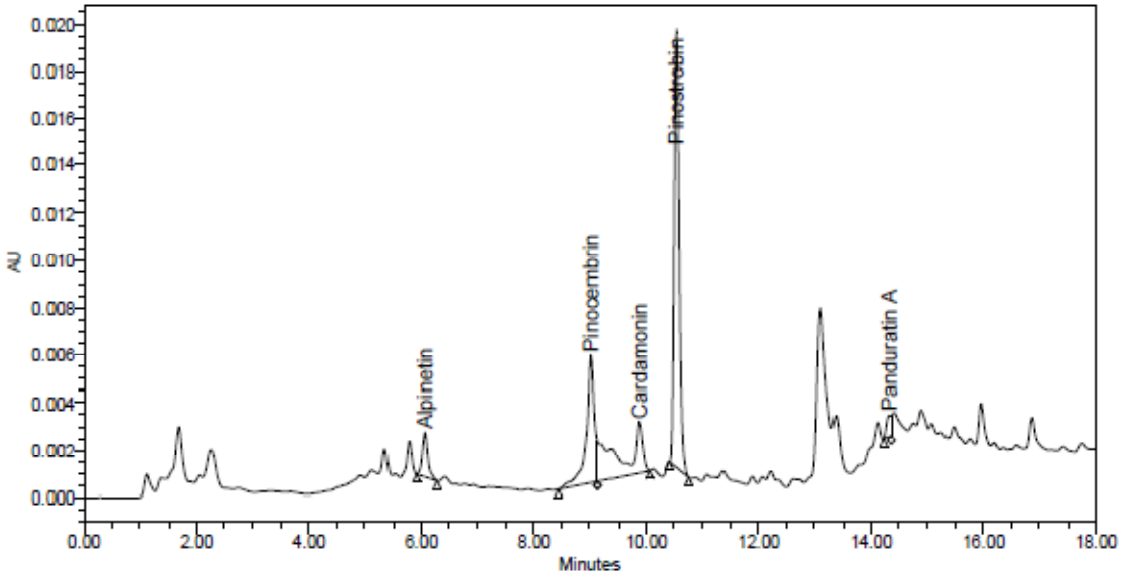


	Peak Name	RT	Area	% Area	Height	Amount	Units	Amount_ug	Concentration	Units	Peak Codes
1	Alpinetin	6.058	15782	7.09	2312	4.953	ug/mL	0.004953	0.247636	ug/mL	
2	Pinocembrin	9.033	36097	16.21	5225	11.117	ug/mL	0.011117	0.555836	ug/mL	
3	Cardamonin	9.878	18226	8.18	2432	7.742	ug/mL	0.007742	0.387092	ug/mL	
4	Pinostrobin	10.548	143083	64.24	22703	47.481	ug/mL	0.047481	2.374067	ug/mL	Q09
5	Panduratin A	14.410	9543	4.28	1086	4.664	ug/ml	0.004664	0.233188	ug/ml	

Control -3

SAMPLE INFORMATION

Sample Name:	SuziControl4X-3	Acquired By:	System
Sample Type:	Unknown	Sample Set Name:	SuziControl4X3
Vial:	1:D,5	Acq. Method Set:	BR azma
Injection #:	1	Processing Method:	Standard 1
Injection Volume:	20.00 ul	Channel Name:	W2489 ChA
Run Time:	18.0 Minutes	Proc. Chnl. Descr.:	W2489 ChA 285nm
Date Acquired:	4/28/2011 3:18:34 PM MYT		
Date Processed:	5/4/2011 2:05:35 PM MYT		

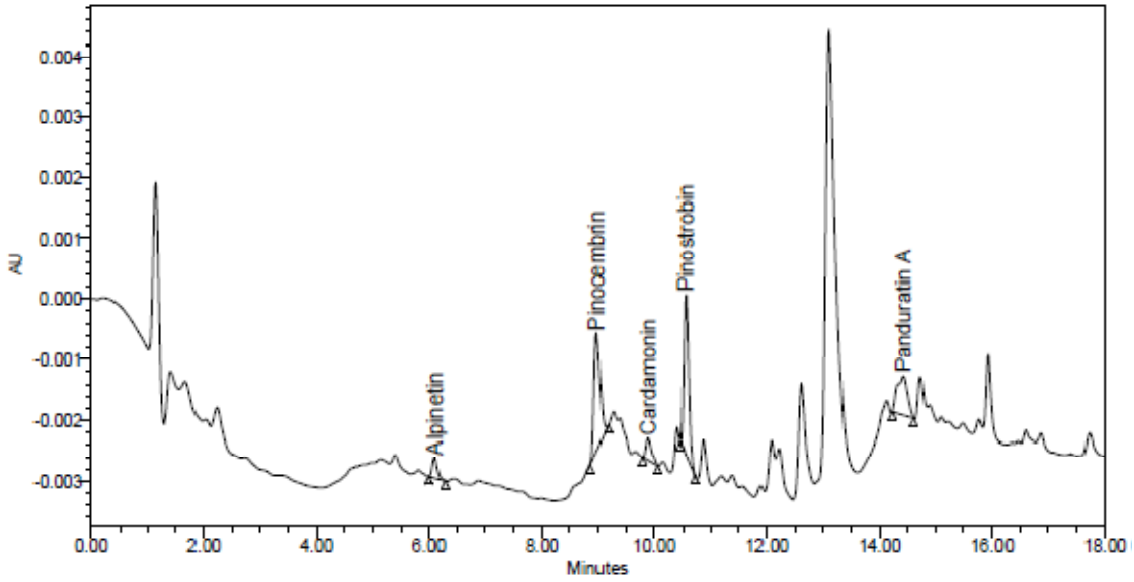


	Peak Name	RT	Area	% Area	Height	Amount	Units	Amount_ug	Concentration	Units	Peak Codes
1	Alpinetin	6.065	12889	5.37	1893	4.029	ug/mL	0.004029	0.201449	ug/mL	
2	Pinocembrin	9.036	53419	22.25	5370	16.441	ug/mL	0.016441	0.822055	ug/mL	I37
3	Cardamonin	9.878	53279	22.19	2193	22.987	ug/mL	0.022987	1.149336	ug/mL	I37 Q09
4	Pinostrobin	10.547	115638	48.16	18456	38.394	ug/mL	0.038394	1.919705	ug/mL	Q09
5	Panduratin A	14.336	4875	2.03	908	2.134	ug/ml	0.002134	0.106715	ug/ml	

Hairyroot1-1

SAMPLE INFORMATION

Sample Name:	SuziT14X-1	Acquired By:	System
Sample Type:	Unknown	Sample Set Name:	SuziT14X1
Vial:	1:B,3	Acq. Method Set:	BRazma
Injection #:	1	Processing Method:	Standard 1
Injection Volume:	20.00 ul	Channel Name:	W2489 ChA
Run Time:	18.0 Minutes	Proc. Chnl. Descr.:	W2489 ChA 285nm
Date Acquired:	5/2/2011 10:40:52 AM MYT		
Date Processed:	5/4/2011 2:10:06 PM MYT		

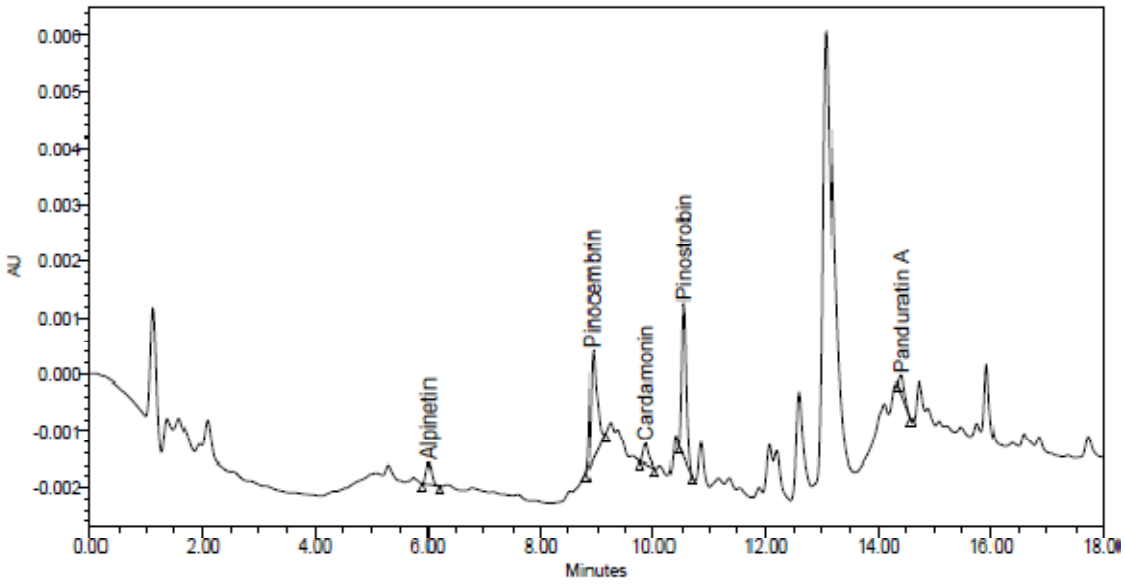


	Peak Name	RT	Area	% Area	Height	Amount	Units	Amount_ug	Concentration	Units
1	Alpinetin	6.105	2039	4.82	339	0.564	ug/mL	0.000564	0.028214	ug/mL
2	Pinocembrin	8.980	13805	32.67	1924	4.265	ug/mL	0.004265	0.213229	ug/mL
3	Cardamonin	9.900	2656	6.29	362	0.970	ug/mL	0.000970	0.048523	ug/mL
4	Pinostrobin	10.564	15461	36.59	2627	5.225	ug/mL	0.005225	0.261263	ug/mL
5	Panduratin A	14.433	8293	19.63	644	3.986	ug/ml	0.003986	0.199320	ug/ml

Hairyroot1-2

SAMPLE INFORMATION

Sample Name:	SuziT14X-2	Acquired By:	System
Sample Type:	Unknown	Sample Set Name:	SuziT14X2
Vial:	1:B,3	Acq. Method Set:	BR azma
Injection #:	1	Processing Method:	Standard 1
Injection Volume:	20.00 ul	Channel Name:	W2489 ChA
Run Time:	18.0 Minutes	Proc. Chnl. Descr.:	W2489 ChA 285nm
Date Acquired:	5/4/2011 10:17:37 AM MYT		
Date Processed:	5/4/2011 11:28:10 AM MYT		

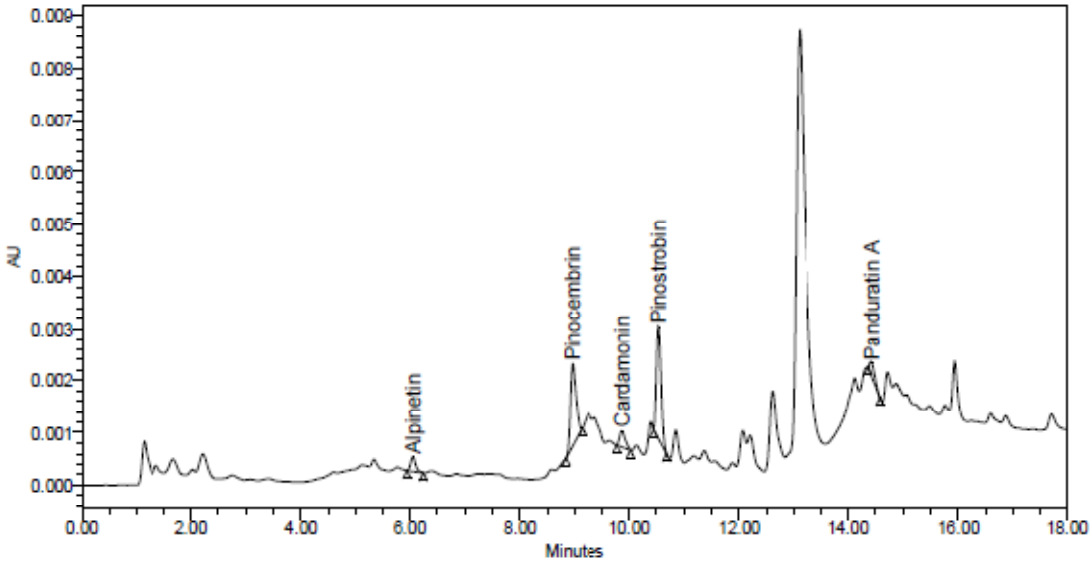


	Peak Name	RT	Area	% Area	Height	Amount	Units	Amount_ug	Concentration	Units
1	Alpinetin	6.020	2145	5.80	360	0.598	ug/mL	0.000598	0.029904	ug/mL
2	Pinocembrin	8.932	14226	38.46	1902	4.394	ug/mL	0.004394	0.219704	ug/mL
3	Cardamonin	9.874	2571	6.95	352	0.933	ug/mL	0.000933	0.046675	ug/mL
4	Pinostrobin	10.538	15896	42.98	2733	5.369	ug/mL	0.005369	0.268457	ug/mL
5	Panduratin A	14.433	2148	5.81	323	0.656	ug/ml	0.000656	0.032811	ug/ml

Hairyroot1-3

SAMPLE INFORMATION

Sample Name:	SuziT14X-3	Acquired By:	System
Sample Type:	Unknown	Sample Set Name:	SuziT14X3
Vial:	1:B,3	Acq. Method Set:	BR azna
Injection #:	1	Processing Method:	Standard 1
Injection Volume:	20.00 ul	Channel Name:	W2489 ChA
Run Time:	18.0 Minutes	Proc. Chnl. Descr.:	W2489 ChA 285nm
Date Acquired:	5/4/2011 11:35:45 AM MYT		
Date Processed:	5/4/2011 11:58:19 AM MYT		

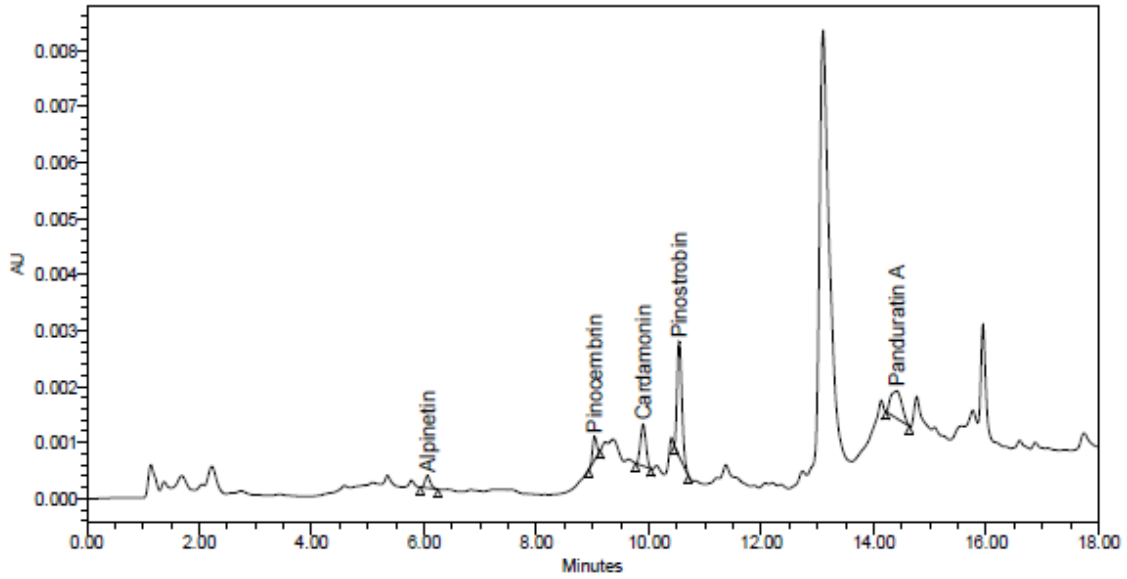


	Peak Name	RT	Area	% Area	Height	Amount	Units	Amount_ug	Concentration	Units
1	Alpinetin	6.061	1732	5.87	279	0.466	ug/mL	0.000466	0.023317	ug/mL
2	Pinocembrin	8.955	11070	37.54	1575	3.424	ug/mL	0.003424	0.171193	ug/mL
3	Cardamonin	9.879	2203	7.47	304	0.773	ug/mL	0.000773	0.038672	ug/mL
4	Pinostrobin	10.540	12765	43.29	2184	4.333	ug/mL	0.004333	0.216630	ug/mL
5	Panduratin A	14.439	1717	5.82	275	0.423	ug/ml	0.000423	0.021137	ug/ml

Hairyroot2-1

SAMPLE INFORMATION

Sample Name:	SuziT24X-1	Acquired By:	System
Sample Type:	Unknown	Sample Set Name:	SuziT24X1
Vial:	1:C,4	Acq. Method Set:	BR azma
Injection #:	1	Processing Method:	Standard 1
Injection Volume:	20.00 ul	Channel Name:	W2489 ChA
Run Time:	18.0 Minutes	Proc. Chnl. Descr.:	W2489 ChA 285nm
Date Acquired:	5/2/2011 12:21:37 PM MYT		
Date Processed:	5/3/2011 4:39:13 PM MYT		

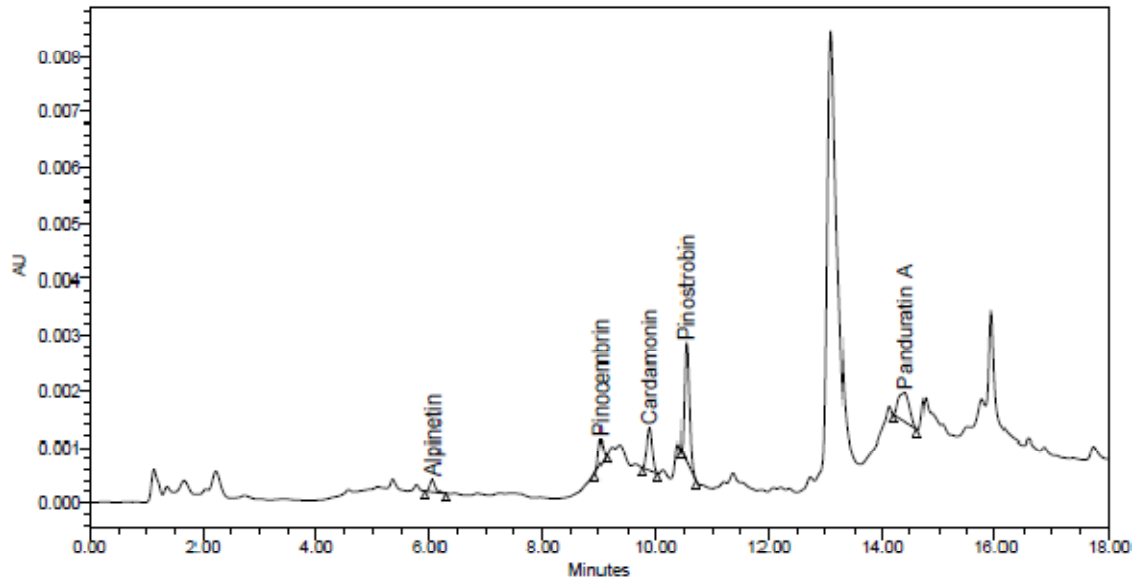


	Peak Name	RT	Area	% Area	Height	Amount	Units	Amount_ug	Concentration	Units
1	Alpinetin	6.063	1424	5.17	218	0.368	ug/mL	0.000368	0.018393	ug/mL
2	Pinocembrin	9.033	2084	7.57	416	0.662	ug/mL	0.000662	0.033095	ug/mL
3	Cardamonin	9.901	5056	18.38	746	2.014	ug/mL	0.002014	0.100718	ug/mL
4	Pinostrobin	10.543	12202	44.35	2063	4.146	ug/mL	0.004146	0.207310	ug/mL
5	Panduratin A	14.419	6750	24.53	492	3.150	ug/ml	0.003150	0.157509	ug/ml

Hairyroot2-2

SAMPLE INFORMATION

Sample Name:	SuziT24X-2	Acquired By:	System
Sample Type:	Unknown	Sample Set Name:	SuziT24X2
Vial:	1:C,4	Acq. Method Set:	BR azma
Injection #:	1	Processing Method:	Standard 1
Injection Volume:	20.00 ul	Channel Name:	W2489 ChA
Run Time:	18.0 Minutes	Proc. Chnl. Descr.:	W2489 ChA 285nm
Date Acquired:	5/4/2011 11:10:51 AM MYT		
Date Processed:	5/4/2011 11:45:03 AM MYT		



	Peak Name	RT	Area	% Area	Height	Amount	Units	Amount_ug	Concentration	Units
1	Alpinetin	6.066	1424	5.03	220	0.368	ug/mL	0.000368	0.018397	ug/mL
2	Pinocembrin	9.029	2160	7.63	423	0.685	ug/mL	0.000685	0.034260	ug/mL
3	Cardamonin	9.896	5202	18.37	760	2.078	ug/mL	0.002078	0.103877	ug/mL
4	Pinostrobin	10.539	12359	43.65	2114	4.198	ug/mL	0.004198	0.209904	ug/mL
5	Panduratin A	14.411	7172	25.33	528	3.379	ug/ml	0.003379	0.168943	ug/ml

Hairyroot2-3

SAMPLE INFORMATION

Sample Name:	SuziT24X-3	Acquired By:	System
Sample Type:	Unknown	Sample Set Name:	SuziT24X3
Vial:	1:B,4	Acq. Method Set:	BRazma
Injection #:	1	Processing Method:	Standard 1
Injection Volume:	20.00 ul	Channel Name:	W2489 ChA
Run Time:	18.0 Minutes	Proc. Chnl. Descr.:	W2489 ChA 285nm
Date Acquired:	5/4/2011 12:00:51 PM MYT		
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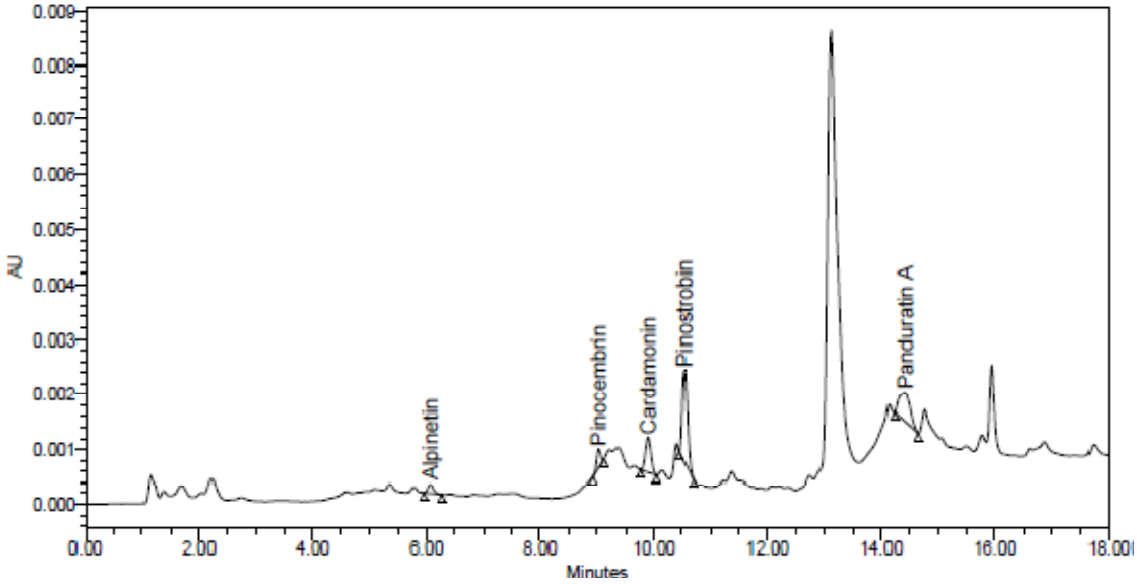
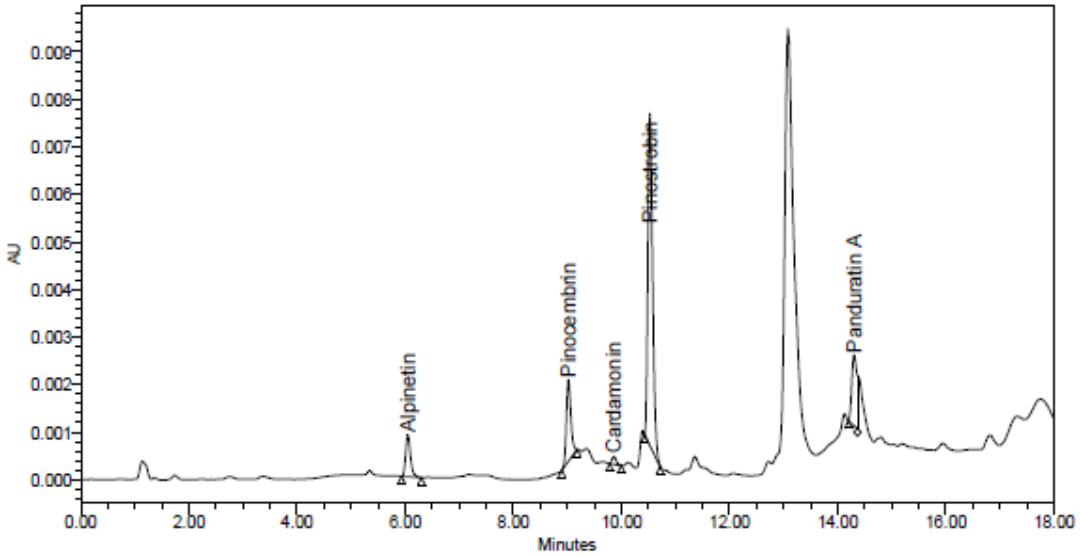


	Peak Name	RT	Area	% Area	Height	Amount	Units	Amount_ug	Concentration	Units
1	Alpinetin	6.066	1131	4.72	175	0.274	ug/mL	0.000274	0.013719	ug/mL
2	Pinocembrin	9.033	1639	6.84	332	0.525	ug/mL	0.000525	0.026252	ug/mL
3	Cardamonin	9.902	4411	18.42	640	1.734	ug/mL	0.001734	0.086691	ug/mL
4	Pinostrobin	10.547	9797	40.92	1682	3.350	ug/mL	0.003350	0.167492	ug/mL
5	Panduratin A	14.426	6967	29.10	522	3.268	ug/ml	0.003268	0.163400	ug/ml

Rhizome

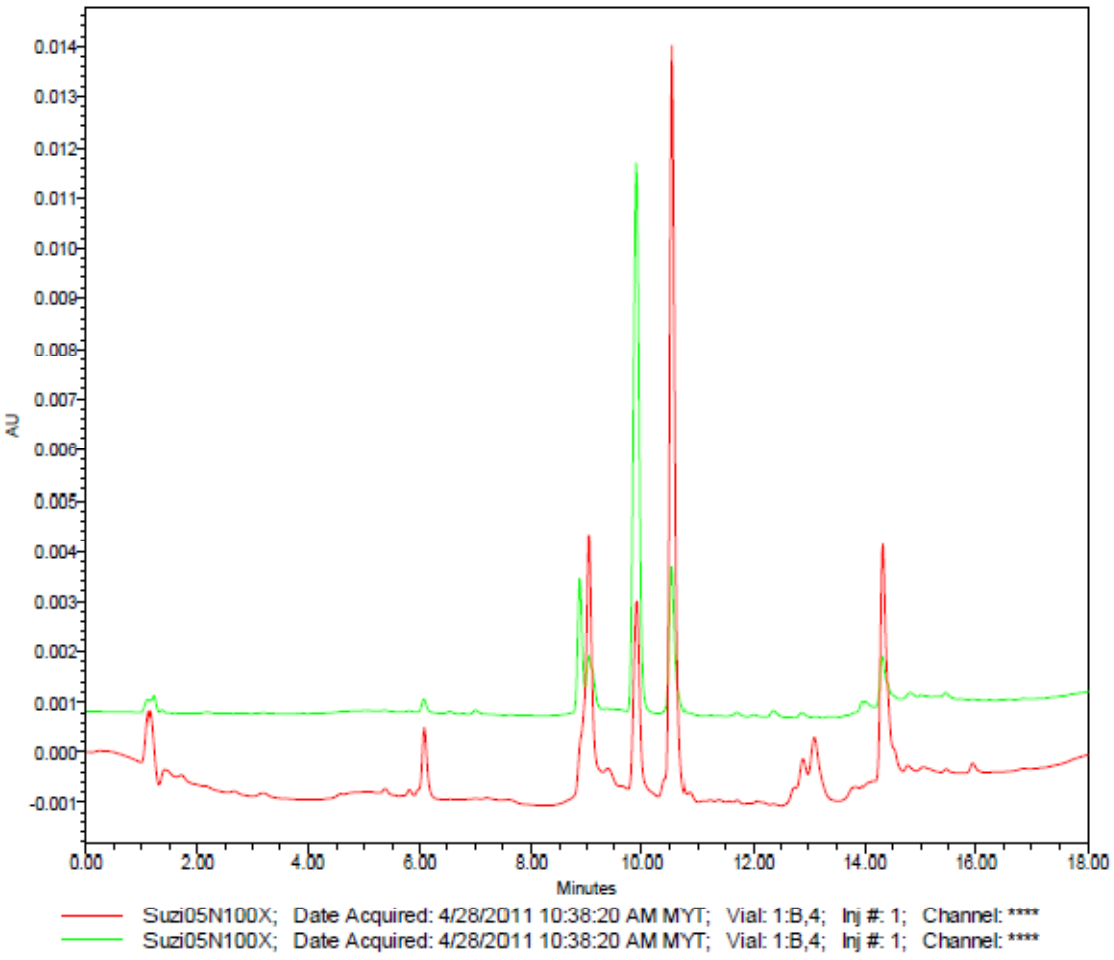
SAMPLE INFORMATION

Sample Name:	SuziRhi4000X-1	Acquired By:	System
Sample Type:	Unknown	Sample Set Name:	SuziRhi4000X1
Vial:	1:C,5	Acq. Method Set:	BR azma
Injection #:	1	Processing Method:	Standard 1
Injection Volume:	20.00 ul	Channel Name:	W2489 ChA
Run Time:	18.0 Minutes	Proc. Chnl. Descr.:	W2489 ChA 285nm
Date Acquired:	5/2/2011 12:49:17 PM MYT		
Date Processed:	5/3/2011 2:20:20 PM MYT		



	Peak Name	RT	Area	% Area	Height	Amount	Units	Amount_ug	Concentration	Units	Peak Codes
1	Alpinetin	6.052	5405	8.01	874	1.639	ug/mL	0.001639	0.081953	ug/mL	
2	Pinocembrin	9.021	9863	14.62	1716	3.053	ug/mL	0.003053	0.152652	ug/mL	
3	Cardamonin	9.865	918	1.36	164	0.215	ug/mL	0.000215	0.010738	ug/mL	
4	Pinostrobin	10.532	42091	62.39	6961	14.043	ug/mL	0.014043	0.702132	ug/mL	Q09
5	Panduratin A	14.309	9183	13.61	1493	4.469	ug/ml	0.004469	0.223435	ug/ml	I37

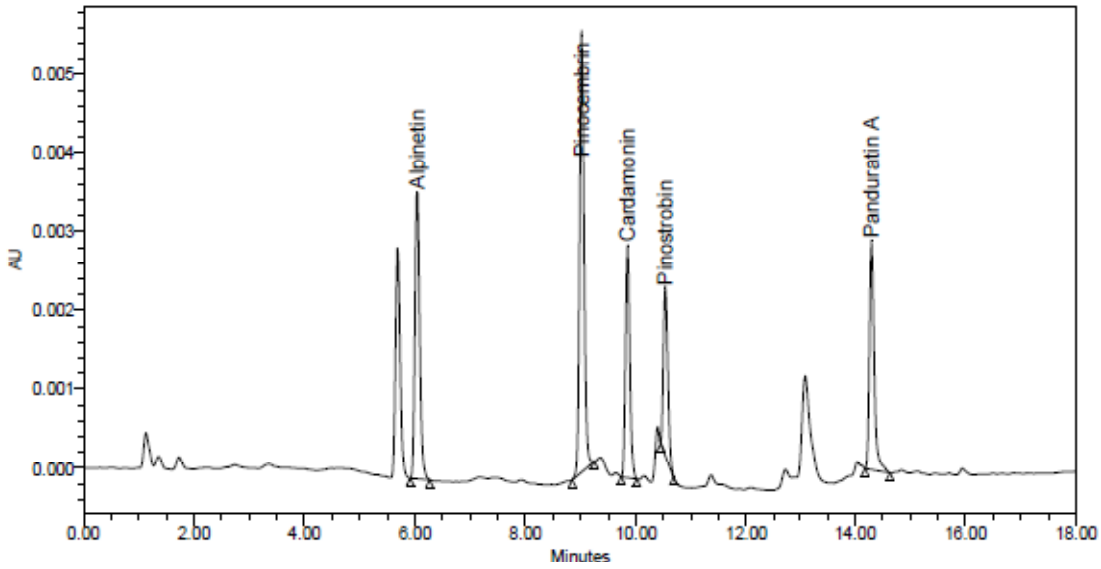
Overlay at 285nm and 330nm example of PGR0.5N



Standard

SAMPLE INFORMATION

Sample Name:	300X	Acquired By:	System
Sample Type:	Standard	Sample Set Name:	300X
Vial:	1:B,4	Acq. Method Set:	BR azma
Injection #:	1	Processing Method:	Standard 1 4 points
Injection Volume:	20.00 ul	Channel Name:	W2489 ChA
Run Time:	18.0 Minutes	Proc. Chnl. Descr.:	W2489 ChA 285nm
Date Acquired:	12/6/2010 5:58:52 PM MYT		
Date Processed:	2/23/2011 11:35:34 AM MYT		



	Peak Name	RT	Area	% Area	Height	Amount	Units	Amount_ug	Concentration	Units
1	Alpinetin	6.041	21961	22.26	3673	6.667	ug/mL	0.006667	0.333333	ug/mL
2	Pinocembrin	9.019	31277	31.70	5563	9.333	ug/mL	0.009333	0.466667	ug/mL
3	Cardamonin	9.850	16156	16.37	2925	6.667	ug/mL	0.006667	0.333333	ug/mL
4	Pinostrobin	10.536	11896	12.06	2134	4.000	ug/mL	0.004000	0.200000	ug/mL
5	Panduratin A	14.301	17374	17.61	2884	8.667	ug/ml	0.008667	0.433333	ug/ml

Sample concentration.

Treatment	DW (mg)	MeOH extract (mg)	Initial concentration (mg/mL)	Dilution for HPLC (X)	Initial concentration (mg/mL)/2	Injection Concentration (mg/mL)
Rhizome	1374.5	89.9	17.9800	4000	8.9900	2.0000
Control	174	16.4	3.2800	4	1.6400	2.0000
PGR 0.5B0.5N	450	16.4	3.2800	200	1.6400	2.0000
PGR0.5N	228	13	4.3333	100	2.1667	2.0000
Hairyroots1	112	12.3	4.1000	4	2.0500	2.0000
Hairy roots2	103	10.7	3.5667	4	1.7833	2.0000

Concentration results from HPLC analysis at 285 nm.

	Alpinetin			Mean	SD	Pinocembrin			Mean	SD
SAMPLE	1	2	3			1	2	3		
Rhizome	0.081953	0.080994	0.079657	0.080868	0.001153	0.152652	0.149991	0.150765	0.151136	0.001369
Control	0.201449	0.247636	0.245948	0.231678	0.026192	0.822055	0.539457	0.555345	0.638952	0.158770
PGR 0.5B0.5N	0.031183	0.031423	0.034923	0.032510	0.002093	0.121268	0.114793	0.133917	0.123326	0.009727
PGR 0.5N	0.120257	0.101801	0.108078	0.110045	0.009384	0.422436	0.569214	0.658145	0.549932	0.119032
Hairyroots1	0.028214	0.029904	0.023317	0.027145	0.003421	0.213229	0.219704	0.171193	0.201375	0.026338
Hairy roots2	0.018393	0.013719	0.018397	0.016836	0.002700	0.033095	0.026252	0.03426	0.031202	0.004327

Concentration results from HPLC analysis at 285 nm.

	Cardamonin			Mean	SD	Pinostrobin			Mean	SD
SAMPLE	1	2	3			1	2	3		
Rhizome	0.010738	0.010231	0.010024	0.010331	0.000367	0.702132	0.701542	0.701003	0.701559	0.000565
Control	1.149336	0.387092	0.375057	0.637162	0.443597	1.919705	2.374067	2.33159	2.208454	0.250964
PGR 0.5B0.5N	0.126425	0.127425	0.140591	0.131480	0.007906	0.531942	0.527943	0.586861	0.548915	0.032923
PGR 0.5N	0.678242	0.670214	0.617918	0.655458	0.032757	1.449676	1.205064	1.531538	1.395426	0.169864
Hairyroots1	0.048523	0.046675	0.038672	0.044623	0.005236	0.261263	0.268457	0.21663	0.248783	0.028077
Hairy roots2	0.100718	0.086691	0.103877	0.097095	0.009148	0.20731	0.167492	0.209904	0.194902	0.023773

	Panduratin A			Mean	SD
SAMPLE	1	2	3		
Rhizome	0.223435	0.213987	0.222345	0.219922	0.005169
Control	0.106715	0.133705	0.129621	0.123347	0.014548
PGR 0.5B0.5N	0.066818	0.065274	0.073308	0.068467	0.004263
PGR 0.5N	1.222516	0.928428	0.813285	0.988076	0.211035
Hairyroots1	0.19932	0.23418	0.203784	0.212428	0.018970
Hairy roots2	0.157509	0.1634	0.168943	0.163284	0.005718

Concentration results from HPLC analysis at 330 nm.

	Alpinetin			Mean	SD	Pinocembrin			Mean	SD
SAMPLE	1	2	3			1	2	3		
Rhizome	0.090438	0.089234	0.091978	0.090550	0.001375	0.037967	0.038567	0.036123	0.037552	0.001274
Control	1.142098	1.266585	1.252677	1.220453	0.068213	0.347789	0.710952	0.439938	0.499560	0.188780
PGR 0.5B0.5N	0.040087	0.039965	0.049511	0.043188	0.005477	0.081922	0.080359	0.095098	0.085793	0.008096
PGR 0.5N	0.144542	0.127888	0.147709	0.140046	0.010648	0.079005	0.05226	0.084066	0.071777	0.017091
Hairyroots1	0.001199	0.059388	0.047673	0.036087	0.030776	0.026726	0.025677	0.024989	0.025797	0.000875
Hairy roots2	0.066564	0.058823	0.046831	0.057406	0.009943	0.040908	0.031816	0.039756	0.037493	0.004950

	Cardamonin			Mean	SD	Pinostrobin			Mean	SD
	1	2	3			1	2	3		
Rhizome	0.001356	0.001575	0.001286	0.001406	0.000151	0.659877	0.651799	0.649965	0.653880	0.005274
Control	0.34882	0.429834	0.396	0.391551	0.040690	1.791545	2.212971	2.158818	2.054445	0.229282
PGR 0.5B0.5N	0.129492	0.129042	0.147172	0.135235	0.010340	0.507168	0.5029	0.566201	0.525423	0.035379
PGR 0.5N	0.625202	0.688645	0.718488	0.677445	0.047641	1.455352	1.184637	1.425581	1.355190	0.148451
Hairyroots1	0.031674	0.027816	0.021548	0.027013	0.005111	0.238884	0.245847	0.299458	0.261396	0.033146
Hairy roots2	0.107364	0.107889	0.086717	0.100657	0.012075	0.205814	0.200475	0.161947	0.189412	0.023935

Concentration results from HPLC analysis at 330 nm.

	Panduratin A			Mean	SD
SAMPLE	1	2	3		
Rhizome	0.100123	0.101923	0.099678	0.100575	0.001189
Control	0.321193	0.192051	0.164149	0.225798	0.083784
PGR 0.5B0.5N	0.087905	0.100055	0.102698	0.096886	0.007889
PGR 0.5N	0.499011	0.86621	0.982356	0.782526	0.252305
Hairyroots1	0.130072	0.058594	0.129305	0.105990	0.041048
Hairy roots2	0.095041	0.098452	0.043812	0.079102	0.030609

Appendix 15

Sample Bioactive Compounds Mean and SD Concentration Result from HPLC Analysis at 285 nm.

	Alpinetin			Mean	SD	Pinocembrin			Mean	SD
Sample	1	2	3			1	2	3		
Rhizome	0.729281	0.720747	0.708850	0.719626	0.010262	1.358416	1.334736	1.341624	1.344925	0.012180
Control	0.009827	0.012080	0.011997	0.011301	0.001278	0.040100	0.026315	0.027090	0.031168	0.007745
PGR 0.5B0.5N	0.076056	0.076641	0.085178	0.079292	0.005106	0.295776	0.279983	0.326627	0.300795	0.023724
PGR 0.5N	0.111015	0.093977	0.099772	0.101588	0.008663	0.389971	0.525469	0.607565	0.507668	0.109884
Hairyroots1	0.001101	0.001167	0.000910	0.001059	0.000134	0.008321	0.008574	0.006681	0.007859	0.001028
Hairy roots2	0.000825	0.000615	0.000825	0.000755	0.000121	0.001485	0.001178	0.001537	0.001400	0.000194

Sample Bioactive Compounds Mean and SD Concentration Result from HPLC Analysis at 285 nm.

	Cardamonin			Mean	SD	Pinostrobin			Mean	SD
Sample	1	2	3			1	2	3		
Rhizome	0.095555	0.091043	0.089201	0.091933	0.003269	6.248116	6.242865	6.238069	6.243017	0.005025
Control	0.056065	0.018883	0.018295	0.031081	0.021639	0.093644	0.115808	0.113736	0.107729	0.012242
PGR 0.5B0.5N	0.308354	0.310793	0.342905	0.320684	0.019283	1.297420	1.287666	2.347444	1.644176	0.609067
PGR 0.5N	0.626118	0.618707	0.570430	0.605085	0.030240	1.338265	1.112452	1.413836	1.288185	0.156809
Hairyroots1	0.001894	0.001821	0.001509	0.001741	0.000204	0.010196	0.010476	0.008454	0.009709	0.001096
Hairy roots2	0.004518	0.003889	0.004660	0.004356	0.000410	0.009300	0.007514	0.009416	0.008743	0.001066

Sample Bioactive Compounds Mean and SD Concentration Result from HPLC Analysis at 285 nm.

	Panduratin A			Mean	SD
Sample	1	2	3		
Rhizome	1.988298	1.904222	1.978598	1.957040	0.045997
Control	0.005206	0.006522	0.006323	0.006017	0.000710
PGR 0.5B0.5N	0.267272	0.261096	0.293232	0.273867	0.017053
PGR 0.5N	1.128563	0.857076	0.750782	0.912141	0.194817
Hairyroots1	0.007778	0.009139	0.007953	0.008290	0.000740
Hairy roots2	0.007066	0.007330	0.007579	0.007325	0.000257

Appendix 16

Sample Bioactive Compounds Mean and SD Concentration Result from HPLC Analysis at 330 nm

	Alpinetin			Mean	SD	Pinocembrin			Mean	SD
Sample	1	2	3			1	2	3		
Rhizome	0.804788	0.794073	0.818492	0.805784	0.012240	0.337860	0.343199	0.321451	0.334170	0.011334
Control	0.055712	0.061785	0.061106	0.059534	0.003327	0.016965	0.034681	0.021460	0.024369	0.009209
Hormone 0.5B0.5N	0.097773	0.097476	0.120759	0.105336	0.013357	0.199810	0.195998	0.231946	0.209251	0.019747
Hormone 0.5N	0.133434	0.118060	0.136357	0.129283	0.009830	0.072933	0.048244	0.077605	0.066261	0.015777
Hairyroots1	0.000047	0.002318	0.001860	0.001408	0.001201	0.001043	0.001002	0.000975	0.001007	0.000034
Hairy roots2	0.002986	0.002639	0.002101	0.002575	0.000446	0.001835	0.001427	0.001783	0.001682	0.000222

Sample Bioactive Compounds Mean and SD Concentration Result from HPLC Analysis at 330 nm

	Cardamonin			Mean	SD	Pinostrobin			Mean	SD
Sample	1	2	3			1	2	3		
Rhizome	0.012067	0.014016	0.011444	0.012509	0.001342	5.872098	5.800214	5.783893	5.818735	0.046929
Control	0.017016	0.020968	0.019317	0.019100	0.001985	0.087392	0.107950	0.105308	0.100217	0.011184
Hormone 0.5B0.5N	0.315834	0.314737	0.358956	0.329842	0.025219	1.236995	1.226585	1.380978	1.281520	0.086291
Hormone 0.5N	0.577154	0.635721	0.663271	0.625382	0.043980	1.343505	1.093595	1.316022	1.251041	0.137043
Hairyroots1	0.001236	0.001086	0.000841	0.001054	0.000199	0.009322	0.009594	0.011686	0.010201	0.001293
Hairy roots2	0.004816	0.004840	0.003890	0.004515	0.000542	0.009233	0.008993	0.007265	0.008497	0.001074

Sample Bioactive Compounds Mean and SD Concentration Result from HPLC Analysis at 330 nm.

	Panduratin A			Mean	SD
Sample	1	2	3		
Rhizome	0.890972	0.906990	0.887012	0.894991	0.010578
Control	0.015668	0.009368	0.008007	0.011015	0.004087
Hormone 0.5B0.5N	0.214402	0.244037	0.250483	0.236307	0.019242
Hormone 0.5N	0.460661	0.799640	0.906860	0.722387	0.232915
Hairyroots1	0.005076	0.002287	0.010344	0.005902	0.004092
Hairy roots2	0.004263	0.004416	0.001965	0.003548	0.001373

Appendix 17

Statistical analysis sample bioactive compounds concentration in 0.5B0.5N treated roots taken at 285nm.

Descriptives

VAR00002

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	Between-Component Variance
					Lower Bound	Upper Bound			
Alpinetin	3	.07929167	.005106099	.002948008	.06660741	.09197592	.076056	.085178	
Pinocembrin	3	.30079533	.023723637	.013696848	.24186255	.35972812	.279983	.326627	
Cardamonin	3	.32068400	.019282552	.011132787	.27278349	.36858451	.308354	.342905	
Pinostrobin	3	1.64417667	.609066903	.351644940	.13117061	3.15718273	1.287666	2.347444	
Panduratin A	3	.27386667	.017052796	.009845436	.23150517	.31622816	.261096	.293232	
Total	15	.52376287	.630378806	.162763108	.17467072	.87285501	.076056	2.347444	
Model Fixed Effects			.272842075	.070447521	.36679601	.68072972			
Random Effects				.283397723	-.26307535	1.31060109			.376757081

Test of Homogeneity of Variances

VAR00002

Levene Statistic	df1	df2	Sig.
15.103	4	10	.000

ANOVA

VAR00002

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.819	4	1.205	16.183	.000
Within Groups	.744	10	.074		
Total	5.563	14			

Post Hoc Tests

Homogeneous Subsets

VAR00002

Duncan[a]

		Subset for alpha = 0.05	
VAR00001	N	1	2
Alpinetin	3	.07929167	
Panduratin A	3	.27386667	
Pinocembrin	3	.30079533	
Cardamonin	3	.32068400	
Pinostrobin	3		1.64417667
Sig.		.336	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Appendix 18

Statistical analysis of sample bioactive compounds concentration in 0.5N treated roots taken at 285nm.

Descriptives

VAR00002

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	Between-Component Variance
						Lower Bound	Upper Bound			
Alpinetin		3	.10158800	.008662953	.005001558	.08006803	.12310797	.093977	.111015	
Pinocembrin		3	.50766833	.109883734	.063441403	.23470201	.78063466	.389971	.607565	
Cardamonin		3	.60508500	.030239998	.017459071	.52996468	.68020532	.570430	.626118	
Pinostrobin		3	1.28818433	.156809227	.090533850	.89864862	1.67772005	1.112452	1.413836	
Panduratin A		3	.91214033	.194817046	.112477674	.42818796	1.39609271	.750782	1.128563	
Total		15	.68293320	.425275467	.109805653	.44742350	.91844290	.093977	1.413836	
Model	Fixed Effects			.122968902	.031750434	.61218882	.75367758			
	Random Effects				.199199046	.12986798	1.23599842			.193360850

Test of Homogeneity of Variances

VAR00002

Levene Statistic	df1	df2	Sig.
3.832	4	10	.039

ANOVA

VAR00002

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.381	4	.595	39.362	.000
Within Groups	.151	10	.015		
Total	2.532	14			

Post Hoc Tests
Homogeneous Subsets

VAR00002

Duncan[a]

		Subset for alpha = 0.05			
VAR00001	N	1	2	3	4
Alpinetin	3	.10158800			
Pinocembrin	3		.50766833		
Cardamonin	3		.60508500		
Panduratin A	3			.91214033	
Pinostrobin	3				1.28818433
Sig.		1.000	.355	1.000	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Appendix 19

Statistical analysis of sample bioactive compounds concentration in "hairyroot1"roots taken at 285nm.

Descriptives

VAR00002

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	Between-Component Variance
						Lower Bound	Upper Bound			
Alpinetin		3	.00105933	.000133470	.000077059	.00072777	.00139089	.000910	.001167	
Pinocembrin		3	.00785867	.001027704	.000593345	.00530571	.01041163	.006681	.008574	
Cardamonin		3	.00174133	.000204490	.000118063	.00123335	.00224932	.001509	.001894	
Pinostrobin		3	.00970867	.001095555	.000632519	.00698716	.01243018	.008454	.010476	
Panduratin A		3	.00829000	.000740444	.000427495	.00645064	.01012936	.007778	.009139	
Total		15	.00573160	.003776300	.000975036	.00364035	.00782285	.000910	.010476	
Model	Fixed Effects			.000756876	.000195425	.00529617	.00616703			
	Random Effects				.001797765	.00074020	.01072300			.000015969

Test of Homogeneity of Variances

VAR00002

Levene Statistic	df1	df2	Sig.
4.991	4	10	.018

ANOVA

VAR00002

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.000	4	.000	84.627	.000
Within Groups	.000	10	.000		
Total	.000	14			

Post Hoc Tests

Homogeneous Subsets

VAR00002

Duncan[a]

		Subset for alpha = 0.05		
VAR00001	N	1	2	3
Alpinetin	3	.00105933		
Cardamonin	3	.00174133		
Pinocembrin	3		.00785867	
Panduratin A	3		.00829000	
Pinostrobin	3			.00970867
Sig.		.296	.501	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Appendix 20

Statistical analysis of sample bioactive compounds concentration in "hairyroot2" roots taken at 285nm.

Descriptives

VAR00002

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	Between-Component Variance
						Lower Bound	Upper Bound			
Alpinetin		3	.00075500	.000121244	.000070000	.00045381	.00105619	.000615	.000825	
Pinocembrin		3	.00140000	.000194008	.000112010	.00091806	.00188194	.001178	.001537	
Cardamonin		3	.00435567	.000410334	.000236907	.00333634	.00537499	.003889	.004660	
Pinostrobin		3	.00874333	.001066213	.000615578	.00609471	.01139195	.007514	.009416	
Panduratin A		3	.00732500	.000256537	.000148111	.00668773	.00796227	.007066	.007579	
Total		15	.00451580	.003292524	.000850126	.00269246	.00633914	.000615	.009416	
Model	Fixed Effects			.000533542	.000137760	.00420885	.00482275			
	Random Effects				.001575454	.00014164	.00888996			.000012315

Test of Homogeneity of Variances

VAR00002

Levene Statistic	df1	df2	Sig.
7.327	4	10	.005

ANOVA

VAR00002

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.000	4	.000	130.787	.000
Within Groups	.000	10	.000		
Total	.000	14			

Post Hoc Tests

Homogeneous Subsets

VAR00002

Duncan[a]

		Subset for alpha = 0.05			
VAR00001	N	1	2	3	4
Alpinetin	3	.00075500			
Pinocembrin	3	.00140000			
Cardamonin	3		.00435567		
Panduratin A	3			.00732500	
Pinostrobin	3				.00874333
Sig.		.170	1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Appendix 21

Statistical analysis of sample bioactive compounds concentration in 0.5B0.5N treated roots taken at 330nm.

Descriptives

VAR00002

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	Between-Component Variance
						Lower Bound	Upper Bound			
Alpinetin		3	.10533600	.013357535	.007711977	.07215404	.13851796	.097476	.120759	
Pinocembrin		3	.20925133	.019746361	.011400567	.16019865	.25830401	.195998	.231946	
Cardamonin		3	.32984233	.025219140	.014560277	.26719452	.39249015	.314737	.358956	
Pinostrobin		3	1.28151933	.086290856	.049820049	1.06716096	1.49587770	1.226585	1.380978	
Panduratin A		3	.23630733	.019242413	.011109612	.18850653	.28410814	.214402	.250483	
Total		15	.43245127	.447074789	.115434214	.18486950	.68003303	.097476	1.380978	
Model	Fixed Effects			.042475239	.010967060	.40801513	.45688740			
	Random Effects				.215260334	-.16520723	1.03010977			.231083674

Test of Homogeneity of Variances

VAR00002

Levene Statistic	df1	df2	Sig.
7.793	4	10	.004

ANOVA

VAR00002

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.780	4	.695	385.254	.000
Within Groups	.018	10	.002		
Total	2.798	14			

Post Hoc Tests

Homogeneous Subsets

VAR00002

Duncan[a]

		Subset for alpha = 0.05			
VAR00001	N	1	2	3	4
Alpinetin	3	.10533600			
Pinocembrin	3		.20925133		
Panduratin A	3		.23630733		
Cardamonin	3			.32984233	
Pinostrobin	3				1.28151933
Sig.		1.000	.453	1.000	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Appendix 22

Statistical analysis of sample bioactive compounds concentration in 0.5N treated roots taken at 330nm.

Descriptives

VAR00002

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	Between-Component Variance
						Lower Bound	Upper Bound			
Alpinetin		3	.12928367	.009829242	.005674916	.10486648	.15370086	.118060	.136357	
Pinocembrin		3	.06626067	.015776790	.009108734	.02706895	.10545239	.048244	.077605	
Cardamonin		3	.62538200	.043979605	.025391637	.51613061	.73463339	.577154	.663271	
Pinostrobin		3	1.25104067	.137042629	.079121599	.91060790	1.59147343	1.093595	1.343505	
Panduratin A		3	.72238700	.232915020	.134473549	.14379402	1.30097998	.460661	.906860	
Total		15	.55887080	.460048942	.118784126	.30410419	.81363741	.048244	1.343505	
Model	Fixed Effects			.122727190	.031688024	.48826548	.62947612			
	Random Effects				.216502917	-.04223766	1.15997926			.229346911

Test of Homogeneity of Variances

VAR00002

Levene Statistic	df1	df2	Sig.
6.914	4	10	.006

ANOVA

VAR00002

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.812	4	.703	46.681	.000
Within Groups	.151	10	.015		
Total	2.963	14			

Post Hoc Tests

Homogeneous Subsets

VAR00002

Duncan[a]

		Subset for alpha = 0.05		
VAR00001	N	1	2	3
Pinocembrin	3	.06626067		
Alpinetin	3	.12928367		
Cardamonin	3		.62538200	
Panduratin A	3		.72238700	
Pinostrobin	3			1.25104067
Sig.		.543	.356	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Appendix 23

Statistical analysis of sample bioactive compounds concentration in 'hairyroot1' roots taken at 330nm.

Descriptives

VAR00002

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	Between-Component Variance
						Lower Bound	Upper Bound			
Alpinetin		3	.00140833	.001200984	.000693388	-.00157508	.00439174	.000047	.002318	
Pinocembrin		3	.00100667	.000034239	.000019768	.00092161	.00109172	.000975	.001043	
Cardamonin		3	.00105433	.000199395	.000115121	.00055901	.00154966	.000841	.001236	
Pinostrobin		3	.01020067	.001293506	.000746806	.00698742	.01341391	.009322	.011686	
Panduratin A		3	.00590233	.004091568	.002362268	-.00426169	.01606635	.002287	.010344	
Total		15	.00391447	.004131306	.001066699	.00162663	.00620231	.000047	.011686	
Model	Fixed Effects			.001994863	.000515071	.00276682	.00506212			
	Random Effects				.001821871	-.00114386	.00897279			.000015270

Test of Homogeneity of Variances

VAR00002

Levene Statistic	df1	df2	Sig.
5.186	4	10	.016

ANOVA

VAR00002

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.000	4	.000	12.511	.001
Within Groups	.000	10	.000		
Total	.000	14			

Post Hoc Tests

Homogeneous Subsets

VAR00002

Duncan[a]

		Subset for alpha = 0.05		
VAR00001	N	1	2	3
Pinocembrin	3	.00100667		
Cardamonin	3	.00105433		
Alpinetin	3	.00140833		
Panduratin A	3		.00590233	
Pinostrobin	3			.01020067
Sig.		.819	1.000	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Appendix 24

Statistical analysis of sample bioactive compounds concentration in "hairyroot2' roots taken at 285nm.

Descriptives

VAR00002

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	Between-Component Variance
						Lower Bound	Upper Bound			
Alpinetin		3	.00257533	.000445922	.000257453	.00146760	.00368306	.002101	.002986	
Pinocembrin		3	.00168167	.000222075	.000128215	.00113000	.00223333	.001427	.001835	
Cardamonin		3	.00451533	.000541687	.000312743	.00316971	.00586096	.003890	.004840	
Pinostrobin		3	.00849700	.001073670	.000619884	.00582986	.01116414	.007265	.009233	
Panduratin A		3	.00354800	.001373051	.000792731	.00013715	.00695885	.001965	.004416	
Total		15	.00416347	.002550212	.000658462	.00275121	.00557573	.001427	.009233	
Model	Fixed Effects			.000846124	.000218468	.00367669	.00465024			
	Random Effects				.001182447	.00088047	.00744647			.000006752

Test of Homogeneity of Variances

VAR00002

Levene Statistic	df1	df2	Sig.
4.617	4	10	.023

ANOVA

VAR00002

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.000	4	.000	29.295	.000
Within Groups	.000	10	.000		
Total	.000	14			

Post Hoc Tests

Homogeneous Subsets

VAR00002

Duncan[a]

		Subset for alpha = 0.05			
VAR00001	N	1	2	3	4
Pinocembrin	3	.00168167			
Alpinetin	3	.00257533	.00257533		
Panduratin A	3		.00354800	.00354800	
Cardamonin	3			.00451533	
Pinostrobin	3				.00849700
Sig.		.225	.189	.192	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.